LG

TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK

SINGLE

R32 Heat Pump (50Hz)
5CSL5-01B (Replaces 5CSL5-01A)

LG
Life's Good

P/No. : MFL67502811

SINGLE
Outdoor Unit

General Information

Product Data

Installation of Outdoor Units

SINGLE
Outdoor Unit

General Information

1. Model Line Up
2. Nomenclature

1. Model Line Up

■ 1 Phase Inverter

Model Names	ZUUW09GA0 [UU09WR UL0]	ZUUW12GA0 [UU12WR UL0]
Nominal Capacity (kW)	2.5	3.4
Power supply	1Ø, 220 - 240V, 50Hz	
External Appearance		

Model Names	ZUUW18GA0 [UU18WR U20]	ZUUW24GA0 [UU24WR U40]
Nominal Capacity (kW)	5.0	6.8
Power supply	1Ø, 220 - 240V, 50Hz	
External Appearance		

Model Names	ZUUW36GA0 [UU36WR U30]	ZUUW42GA0 [UU42WR U30]	ZUUW48GA0 [UU48WR U30]	ZUUW60GA0 [UU60WR U30]
Nominal Capacity (kW)	9.5	12.0	13.4	14.6
Power supply	1Ø, 220 - 240V, 50Hz			
External Appearance				

1. Model Line Up

■ 3 Phase Inverter

Model Names	ZUUW36LA0 [UU37WR U30]	ZUUW42LA0 [UU43WR U30]	ZUUW48LA0 [UU49WR U30]	ZUUW60LA0 [UU61WR U30]
Nominal Capacity (kW)	9.5	12.0	13.4	14.6
Power supply	3Ø, 380 - 415V, 50Hz			
External Appearance				

2. Nomenclature

2.1 Outdoor units(Global)

Model Name	ZUU	W	24	G	A	0
No.	1	2	3	4	5	6

No.	Signification
1	**Indicates that this is a R32 SINGLE CAC Outdoor unit**
2	**Model type** C : Cooling Only, H : Heat Pump, W: Inverter Heat Pump
3	**Capacity Code based on 'kBtu/h' units**
4	**Electrical rating** G: 1Ø, 220-240V, 50Hz / 1Ø, 220V, 60Hz L : 3Ø, 380-415V,50Hz / 3Ø, 380V, 50Hz
5	**Model Type** A : Standard
6	**Serial No.**

2.2 Outdoor units(Europe)

Model Name	U	U	24	W	R	U4	0
No.	1	2	3	4	5	6	7

No.	Signification
1	**Model type** U : Universal model
2	**Type** U : Outdoor units
3	**Capacity Code based on 'kBtu/h' units**
4	**Model type** W : Inverter
5	**Detailed product type** R : Outdoor units using R32
6	**Outdoor unit chassis name**
7	**Serial number**

SINGLE
Outdoor Unit

Product Data

1. List of Functions

■ 1 Phase Inverter

Category	Functions	ZUUW09GA0 [UU09WR UL0], ZUUW12GA0 [UU12WR UL0]
Reliability	Defrost / Deicing	O
	High pressure switch	O
	Low pressure switch	X
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Silent Operation	X
	Wiring Error Check	X
	Peak Control	X
	Mode Lock	X
	Forced Cooling Operation (Outdoor Unit)	X
	SLC(Smart Load Control)	X
Network function	Network solution(LGAP)	X
ODU Dry Contact		X

Note

1. O : Applied, X : Not applied
   Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category		Product	Etc	ZUUW09GA0 [UU09WR UL0] ZUUW12GA0 [UU12WR UL0]
Central Controller	Simple	PQCSZ250S0	AC EZ	X
	AC Ez Touch	PACEZA000	AC Ez Touch	X
	AC Smart	PACS4B000	AC Smart IV	X
	ACP	PACP4B000	ACP IV	X
	AC Manager[2)]	PACM4B000	AC Manager IV	X
		PACM5A000	AC Manager 5	X
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	X
		PMNFP14A0	PI 485 Gateway	X
		PV485N000	PI 485 Gateway	X
	Low Ambient Kit	AQLA	-	X
		PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return Air Temperature Control	X
		PAHCMS000	Discharge Air Temperature Control	X
	BACnet	PQNFB17C0	ACP BACnet	X
	Lonworks	PLNWKB000	ACP Lonworks	X
	Lon Translator	PLNTRN000	Lon Translator	X
ETC	PDI	PPWRDB000	PDI Standard	X
		PQNUD1S40	PDI Premium	X
	ACS IO Module	PEXPMB000	-	X

Note

1. O: Possible, X: Impossible, - : Not applicable
2. * : Some advanced functions controlled by individual controller cannot be operated.
3. [2)] : ACP IV , AC Smart IV, ACP BACnet or ACP Lonworks is needed.
4. Compatibility of individual controller(wireless/wired remote controller) could be found with function list on Indoor Unit's PDB.
5. If you need more detail, please refer to the ***BECON*** PDB or the manual of product.
   (http://partner.lge.com/global : Home> Download> Manuals)

1. List of Functions

Category	Functions	ZUUW18GA0 [UU18WR U20], ZUUW24GA0 [UU24WR U40]
Reliability	Defrost / Deicing	O
	High pressure switch	O
	Low pressure switch	X
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Silent Operation	O
	Wiring Error Check	X
	Peak Control	O
	Mode Lock	O
	Forced Cooling Operation (Outdoor Unit)	O
	SLC(Smart Load Control)	X
Network function	Network solution(LGAP)	O
ODU Dry Contact		X

Note

1. O : Applied, X : Not applied
   Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category		Product	Etc	ZUUW18GA0 [UU18WR U20] ZUUW24GA0 [UU24WR U40]
Central Controller	Simple	PQCSZ250S0	AC EZ	O
	AC Ez Touch	PACEZA000	AC Ez Touch	O
	AC Smart	PACS4B000	AC Smart IV	O
	ACP	PACP4B000	ACP IV	O
	AC Manager[2)]	PACM4B000	AC Manager IV	O
		PACM5A000	AC Manager 5	X
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	O
		PMNFP14A0	PI 485 Gateway	O
		PV485N000	PI 485 Gateway	X
	Low Ambient Kit	AQLA	-	X
		PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return Air Temperature Control	O
		PAHCMS000	Discharge Air Temperature Control	X
	BACnet	PQNFB17C0	ACP BACnet	O
	Lonworks	PLNWKB000	ACP Lonworks	O
	Lon Translator	PLNTRN000	Lon Translator	X
ETC	PDI	PPWRDB000	PDI Standard	X
		PQNUD1S40	PDI Premium	X
	ACS IO Module	PEXPMB000	-	X

Note

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1. List of Functions

Category	Functions	ZUUW36GA0 [UU36WR U30], ZUUW42GA0 [UU42WR U30] ZUUW48GA0 [UU48WR U30], ZUUW60GA0 [UU60WR U30]
Reliability	Defrost / Deicing	O
	High pressure switch	O
	Low pressure switch	X
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Silent Operation	O
	Wiring Error Check	X
	Peak Control	O
	Mode Lock	O
	Forced Cooling Operation (Outdoor Unit)	O
	SLC(Smart Load Control)	X
Network function	Network solution(LGAP)	O
ODU Dry Contact		O (On/off control)

Note

1. O : Applied, X : Not applied
   Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category		Product	Etc	ZUUW36GA0 [UU36WR U30] ZUUW42GA0 [UU42WR U30] ZUUW48GA0 [UU48WR U30] ZUUW60GA0 [UU60WR U30]
Central Controller	Simple	PQCSZ250S0	AC EZ	O
	AC Ez Touch	PACEZA000	AC Ez Touch	O
	AC Smart	PACS4B000	AC Smart IV	O
	ACP	PACP4B000	ACP IV	O
	AC Manager[2)]	PACM4B000	AC Manager IV	O
		PACM5A000	AC Manager 5	O
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	O
		PMNFP14A0	PI 485 Gateway	O
		PV485N000	PI 485 Gateway	X
	Cool/Heat Selector	PRDSBM	Dry Contact For ODU (Cool/Heat)	X
	Low Ambient Kit	AQLA	-	X
		PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return Air Temperature Control	O
		PAHCMS000	Discharge Air Temperature Control	X
	BACnet	PQNFB17C0	ACP BACnet	O
	Lonworks	PLNWKB000	ACP Lonworks	O
	Lon Translator	PLNTRN000	Lon Translator	X
ETC	PDI	PPWRDB000	PDI Standard	O
		PQNUD1S40	PDI Premium	O
	DO KIT	PQNFP00T0	-	X
	ACS IO Module	PEXPMB000	-	X

Note

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1. List of Functions

■ 3 Phase Inverter

Category	Functions	ZUUW36LA0 [UU37WR U30], ZUUW42LA0 [UU43WR U30] ZUUW48LA0 [UU49WR U30], ZUUW60LA0 [UU61WR U30]
Reliability	Defrost / Deicing	O
	High pressure switch	O
	Low pressure switch	X
	Phase protection	O
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Silent Operation	O
	Wiring Error Check	X
	Peak Control	O
	Mode Lock	O
	Forced Cooling Operation (Outdoor Unit)	O
	SLC(Smart Load Control)	X
Network function	Network solution(LGAP)	O
ODU Dry Contact		O (On/off control)

Note

1. O : Applied, X : Not applied
   Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category		Product	Etc	ZUUW36LA0 [UU37WR U30] ZUUW42LA0 [UU43WR U30] ZUUW48LA0 [UU49WR U30] ZUUW60LA0 [UU61WR U30]
Central Controller	Simple	PQCSZ250S0	AC EZ	O
	AC Ez Touch	PACEZA000	AC Ez Touch	O
	AC Smart	PACS4B000	AC Smart IV	O
	ACP	PACP4B000	ACP IV	O
	AC Manager[2)]	PACM4B000	AC Manager IV	O
		PACM5A000	AC Manager 5	O
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	O
		PMNFP14A0	PI 485 Gateway	O
		PV485N000	PI 485 Gateway	X
	Cool/Heat Selector	PRDSBM	Dry Contact For ODU (Cool/Heat)	X
	Low Ambient Kit	AQLA	-	X
		PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return Air Temperature Control	O
		PAHCMS000	Discharge Air Temperature Control	X
	BACnet	PQNFB17C0	ACP BACnet	O
	Lonworks	PLNWKB000	ACP Lonworks	O
	Lon Translator	PLNTRN000	Lon Translator	X
ETC	PDI	PPWRDB000	PDI Standard	O
		PQNUD1S40	PDI Premium	O
	DO KIT	PQNFP00T0	-	X
	ACS IO Module	PEXPMB000	-	X

Note

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2. * : Some advanced functions controlled by individual controller cannot be operated.
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2. Specifications

■ Combinational Specifiactions

◆ 1 Phase Inverter

Combination	Outdoor unit			ZUUW09GA0 [UU09WR UL0]	ZUUW09GA0 [UU09WR UL0]
	Indoor unit			ZTNW09GRLA0 [CT09R NR0]	ZBNW09GL2A0 [CL09LR N20]
Capacity	Cooling	Min.~Rated~Max.	kW	1.00 ~ 2.50 ~ 2.87	1.10 ~ 2.50 ~ 3.20
	Heating	Min.~Rated~Max.	kW	1.20 ~ 3.00 ~ 3.45	1.20 ~ 3.20 ~ 3.60
Power Input	Cooling	Min.~Rated~Max.	kW	0.11 ~ 0.63~ 0.99	0.11 ~ 0.64~ 1.06
	Heating	Min.~Rated~Max.	kW	0.18 ~ 0.75 ~ 1.20	0.18 ~ 0.74~ 1.28
Running Current	Cooling	Rated	A	2.70	2.80
	Heating	Rated	A	3.50	3.20
SEER / SCOP			Wh / Wh	6.77 / 4.36	6.28 / 4.00
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A++ / A+
Annual Energy Consumption		Cooling / Heating	kWh	129 / 963	139 / 1,050

Combination	Outdoor unit			ZUUW12GA0 [UU12WR UL0]	ZUUW12GA0 [UU12WR UL0]
	Indoor unit			ZTNW12GRLA0 [CT12R NR0]	ZBNW12GL2A0 [CL12R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	1.36 ~ 3.40 ~ 3.90	1.40 ~ 3.40 ~ 3.90
	Heating	Min.~Rated~Max.	kW	1.60 ~ 4.00 ~ 4.60	1.60 ~ 4.00 ~ 4.70
Power Input	Cooling	Min.~Rated~Max.	kW	0.11 ~ 0.97 ~ 1.55	0.11 ~ 0.99 ~ 1.59
	Heating	Min.~Rated~Max.	kW	0.18 ~ 1.12 ~ 1.79	0.18 ~ 1.00 ~ 1.60
Running Current	Cooling	Rated	A	4.30	4.20
	Heating	Rated	A	5.00	4.60
SEER / SCOP			Wh / Wh	6.58 / 4.40	6.28 / 4.00
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A++ / A+
Annual Energy Consumption		Cooling / Heating	kWh	181 / 955	189 / 1,050

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW18GA0 [UU18WR U20]	ZUUW18GA0 [UU18WR U20]
	Indoor unit			ZTNW18GQLA0 [CT18R NQ0]	ZBNW18GM1A0 [CM18R N10]
Capacity	Cooling	Min.~Rated~Max.	kW	2.00 ~ 5.00 ~ 5.75	1.80 ~ 5.00 ~ 6.00
	Heating	Min.~Rated~Max.	kW	2.20 ~ 5.80 ~ 6.80	2.20 ~ 6.00 ~ 7.20
Power Input	Cooling	Min.~Rated~Max.	kW	0.30 ~ 1.56 ~ 2.50	0.30 ~ 1.46 ~ 2.34
	Heating	Min.~Rated~Max.	kW	0.28 ~ 1.66 ~ 2.66	0.22 ~ 1.60 ~ 2.56
Running Current	Cooling	Rated	A	7.10	6.50
	Heating	Rated	A	7.50	7.10
SEER / SCOP			Wh / Wh	6.25 / 4.25	6.30 / 4.15
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A++ / A+
Annual Energy Consumption		Cooling / Heating	kWh	280/ 1,351	278/ 1,383

Combination	Outdoor unit			ZUUW18GA0 [UU18WR U20]	ZUUW18GA0 [UU18WR U20]
	Indoor unit			ZBNW18GL2A0 [CL18R N20]	ZVNW18GM1A0 [UV18R N10]
Capacity	Cooling	Min.~Rated~Max.	kW	2.00 ~ 5.00 ~ 6.00	1.92 ~ 5.00 ~ 6.00
	Heating	Min.~Rated~Max.	kW	2.20 ~ 6.00 ~ 7.20	2.00 ~ 5.20 ~ 6.30
Power Input	Cooling	Min.~Rated~Max.	kW	0.30 ~ 1.52 ~ 2.47	0.32 ~ 1.38 ~ 2.21
	Heating	Min.~Rated~Max.	kW	0.23 ~ 1.76 ~ 2.82	0.20 ~ 1.52 ~ 2.43
Running Current	Cooling	Rated	A	6.80	6.10
	Heating	Rated	A	7.80	6.70
SEER / SCOP			Wh / Wh	6.30 / 3.95	6.50 / 4.3
Seasonal Energy Label		Cooling / Heating	-	A++ / A	A++ / A+
Annual Energy Consumption		Cooling / Heating	kWh	278 / 1,453	269 / 1,335

Note

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW24GA0 [UU24WR U40]	ZUUW24GA0 [UU24WR U40]
	Indoor unit			ZTNW24GPLA0 [CT24R NP0]	ZBNW24GM1A0 [CM24 N10]
Capacity	Cooling	Min.~Rated~Max.	kW	2.84 ~ 6.80 ~ 7.80	2.80 ~ 6.80 ~ 7.80
	Heating	Min.~Rated~Max.	kW	3.20 ~ 8.00 ~ 8.80	3.20 ~ 7.50 ~ 8.30
Power Input	Cooling	Min.~Rated~Max.	kW	0.32 ~ 1.94 ~ 2.73	0.32 ~ 2.03 ~ 2.92
	Heating	Min.~Rated~Max.	kW	0.32 ~ 2.00 ~ 3.20	0.32 ~ 2.20~ 3.74
Running Current	Cooling	Rated	A	8.60	9.00
	Heating	Rated	A	8.80	9.80
SEER / SCOP			Wh / Wh	7.70 / 4.60	6.81 / 4.01
Seasonal Energy Label		Cooling / Heating	-	A++ / A++	A++ / A+
Annual Energy Consumption		Cooling / Heating	kWh	309 / 1,765	350 / 1,890

Combination	Outdoor unit			ZUUW24GA0 [UU24WR U40]	ZUUW24GA0 [UU24WR U40]
	Indoor unit			ZBNW24GL3A0 [CL24R N30]	ZVNW24GM1A0 [UV24R N10]
Capacity	Cooling	Min.~Rated~Max.	kW	4.00 ~ 7.10 ~ 7.70	2.80 ~ 6.80 ~ 7.48
	Heating	Min.~Rated~Max.	kW	2.00 ~ 7.50 ~ 8.20	3.00~ 7.50 ~8.30
Power Input	Cooling	Min.~Rated~Max.	kW	0.32 ~ 2.15 ~ 3.03	0.32 ~ 1.97 ~ 2.78
	Heating	Min.~Rated~Max.	kW	0.32 ~ 2.06 ~ 3.30	0.32 ~ 2.20~ 3.30
Running Current	Cooling	Rated	A	9.50	8.70
	Heating	Rated	A	9.10	9.80
SEER / SCOP			Wh / Wh	6.60 / 4.20	7.10/ 4.30
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A++ / A+
Annual Energy Consumption		Cooling / Heating	kWh	377 / 1,798	335 / 1,758

Note

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW36GA0 [UU36WR U30]	ZUUW36GA0 [UU36WR U30]
	Indoor unit			ZTNW36GMLA0 [UT36R NM0]	ZBNW36GM2A0 [UM36R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	4.5 ~ 9.5 ~ 13.0	4.5 ~ 9.5 ~ 13.0
	Heating	Min.~Rated~Max.	kW	5.0 ~ 10.8 ~ 13.7	5.0 ~ 10.8 ~ 13.7
Power Input	Cooling	Min.~Rated~Max.	kW	0.73 ~ 2.47 ~ 3.71	0.78 ~ 2.43 ~ 3.71
	Heating	Min.~Rated~Max.	kW	1.16 ~ 2.80 ~ 3.81	1.39 ~ 2.85 ~ 3.91
Running Current	Cooling	Rated	A	10.7	10.6
	Heating	Rated	A	12.2	12.4
SEER / SCOP			Wh / Wh	6.50 / 4.30	5.62 / 4.04
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A+ / A+
Annual Energy Consumption		Cooling / Heating	kWh	512 / 2,605	594 / 2,800

Combination	Outdoor unit			ZUUW36GA0 [UU36WR U30]
	Indoor unit			ZVNW36GM2A0 [UV36R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	4.5 ~ 9.5 ~ 13.0
	Heating	Min.~Rated~Max.	kW	5.0 ~ 10.8 ~ 13.7
Power Input	Cooling	Min.~Rated~Max.	kW	0.79 ~ 2.30 ~ 3.51
	Heating	Min.~Rated~Max.	kW	1.39 ~ 2.75 ~ 3.70
Running Current	Cooling	Rated	A	10.0
	Heating	Rated	A	12.0
SEER / SCOP			Wh / Wh	5.62 / 4.04
Seasonal Energy Label		Cooling / Heating	-	A+ / A+
Annual Energy Consumption		Cooling / Heating	kWh	594 / 2,800

Note

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW42GA0 [UU42WR U30]	ZUUW42GA0 [UU42WR U30]
	Indoor unit			ZTNW42GMLA0 [UT42R NM0]	ZBNW42GM2A0 [UM42R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.0 ~ 12.0 ~ 14.5	5.0 ~ 12.0 ~ 14.5
	Heating	Min.~Rated~Max.	kW	5.5 ~ 13.5 ~ 16.5	5.5 ~ 13.5 ~ 16.5
Power Input	Cooling	Min.~Rated~Max.	kW	0.85 ~ 3.50 ~ 4.68	0.88 ~ 3.45 ~ 4.68
	Heating	Min.~Rated~Max.	kW	1.34 ~ 3.75 ~ 4.85	1.41 ~ 3.65 ~ 4.71
Running Current	Cooling	Rated	A	15.2	15.0
	Heating	Rated	A	16.3	15.9
SEER / SCOP			Wh / Wh	6.18 / 4.17	5.56 / 4.00
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A / A+
Annual Energy Consumption		Cooling / Heating	kWh	689 / 2,732	764 / 2,800

Combination	Outdoor unit			ZUUW42GA0 [UU42WR U30]
	Indoor unit			ZVNW42GM2A0 [UV42R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.0 ~ 12.0 ~ 14.5
	Heating	Min.~Rated~Max.	kW	5.5 ~ 13.5 ~ 16.5
Power Input	Cooling	Min.~Rated~Max.	kW	0.86 ~ 3.65 ~ 4.83
	Heating	Min.~Rated~Max.	kW	1.41 ~ 4.00 ~ 5.32
Running Current	Cooling	Rated	A	15.9
	Heating	Rated	A	17.4
SEER / SCOP			Wh / Wh	5.56 / 4.00
Seasonal Energy Label		Cooling / Heating	-	A / A+
Annual Energy Consumption		Cooling / Heating	kWh	764 / 2,800

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW48GA0 [UU48WR U30]	ZUUW48GA0 [UU48WR U30]
	Indoor unit			ZTNW48GMLA0 [UT48R NM0]	ZBNW48GM3A0 [UM48R N30]
Capacity	Cooling	Min.~Rated~Max.	kW	5.5 ~ 13.4 ~ 16.0	5.5 ~ 13.4 ~ 16.0
	Heating	Min.~Rated~Max.	kW	6.1 ~ 15.5 ~ 18.0	6.1 ~ 15.5 ~ 18.0
Power Input	Cooling	Min.~Rated~Max.	kW	0.96 ~ 4.35 ~ 5.71	0.95 ~ 4.00 ~ 5.16
	Heating	Min.~Rated~Max.	kW	1.61 ~ 4.82 ~ 5.81	1.61 ~ 4.40 ~ 5.29
Running Current	Cooling	Rated	A	18.9	17.4
	Heating	Rated	A	21.0	19.1
SEER / SCOP			Wh / Wh	5.87 / 4.04	5.51 / 3.96
Seasonal Energy Label		Cooling / Heating	-	-	-
Annual Energy Consumption		Cooling / Heating	kWh	809 / 3,255	853 / 3,338

Combination	Outdoor unit			ZUUW48GA0 [UU48WR U30]
	Indoor unit			ZVNW48GM2A0 [UV48R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.5 ~ 13.4 ~ 16.0
	Heating	Min.~Rated~Max.	kW	6.1 ~ 15.5 ~ 18.0
Power Input	Cooling	Min.~Rated~Max.	kW	0.96 ~ 4.15 ~ 5.33
	Heating	Min.~Rated~Max.	kW	1.61 ~ 4.90 ~ 6.00
Running Current	Cooling	Rated	A	18.0
	Heating	Rated	A	21.3
SEER / SCOP			Wh / Wh	5.51 / 3.96
Seasonal Energy Label		Cooling / Heating	-	-
Annual Energy Consumption		Cooling / Heating	kWh	853 / 3,338

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW60GA0 [UU60WR U30]	ZUUW60GA0 [UU60WR U30]
	Indoor unit			ZTNW60GMLA0 [UT60R NM0]	ZBNW60GM3A0 [UM60R N30]
Capacity	Cooling	Min.~Rated~Max.	kW	5.9 ~ 14.6 ~ 16.3	5.9 ~ 15.0 ~ 16.3
	Heating	Min.~Rated~Max.	kW	6.8 ~ 16.9 ~ 18.7	6.8 ~ 16.8 ~ 18.7
Power Input	Cooling	Min.~Rated~Max.	kW	1.07 ~ 5.38 ~ 6.52	1.02 ~ 4.75 ~ 5.43
	Heating	Min.~Rated~Max.	kW	1.20 ~ 5.60 ~ 6.68	1.74 ~ 4.80 ~ 5.84
Running Current	Cooling	Rated	A	23.4	20.7
	Heating	Rated	A	24.3	20.9
SEER / SCOP			Wh / Wh	5.57 / 3.92	5.45 / 3.92
Seasonal Energy Label		Cooling / Heating	-	-	-
Annual Energy Consumption		Cooling / Heating	kWh	929 / 3,338	972 / 3,338

Combination	Outdoor unit			ZUUW60GA0 [UU60WR U30]
	Indoor unit			ZVNW60GM2A0 [UV60R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.7 ~ 14.4 ~ 15.7
	Heating	Min.~Rated~Max.	kW	6.8 ~ 16.8 ~ 18.7
Power Input	Cooling	Min.~Rated~Max.	kW	1.02 ~ 4.90 ~ 5.61
	Heating	Min.~Rated~Max.	kW	1.84 ~ 5.55 ~ 6.68
Running Current	Cooling	Rated	A	21.3
	Heating	Rated	A	24.1
SEER / SCOP			Wh / Wh	5.45 / 3.92
Seasonal Energy Label		Cooling / Heating	-	-
Annual Energy Consumption		Cooling / Heating	kWh	933 / 3,338

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

◆ 3 Phase Inverter

Combination	Outdoor unit			ZUUW36LA0 [UU37WR U30]	ZUUW36LA0 [UU37WR U30]
	Indoor unit			ZTNW36GMLA0 [UT36R NM0]	ZBNW36GM2A0 [UM36R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	4.5 ~ 9.5 ~ 13.0	4.5 ~ 9.5 ~ 13.0
	Heating	Min.~Rated~Max.	kW	5.0 ~ 10.8 ~ 13.7	5.0 ~ 10.8 ~ 13.7
Power Input	Cooling	Min.~Rated~Max.	kW	0.73 ~ 2.47 ~ 3.71	0.78 ~ 2.43 ~ 3.71
	Heating	Min.~Rated~Max.	kW	1.16 ~ 2.80 ~ 3.81	1.39 ~ 2.85 ~ 3.91
Running Current	Cooling	Rated	A	3.6	3.5
	Heating	Rated	A	4.0	4.1
SEER / SCOP			Wh / Wh	6.50 / 4.30	5.62 / 4.04
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A+ / A+
Annual Energy Consumption		Cooling / Heating	kWh	512 / 2,605	594 / 2,800

Combination	Outdoor unit			ZUUW36LA0 [UU37WR U30]
	Indoor unit			ZVNW36GM2A0 [UV36R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	4.5 ~ 9.5 ~ 13.0
	Heating	Min.~Rated~Max.	kW	5.0 ~ 10.8 ~ 13.7
Power Input	Cooling	Min.~Rated~Max.	kW	0.79 ~ 2.30 ~ 3.51
	Heating	Min.~Rated~Max.	kW	1.39 ~ 2.75 ~ 3.70
Running Current	Cooling	Rated	A	3.3
	Heating	Rated	A	4.0
SEER / SCOP			Wh / Wh	5.62 / 4.04
Seasonal Energy Label		Cooling / Heating	-	A+ / A+
Annual Energy Consumption		Cooling / Heating	kWh	594 / 2,800

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW42LA0 [UU43WR U30]	ZUUW42LA0 [UU43WR U30]
	Indoor unit			ZTNW42GMLA0 [UT42R NM0]	ZBNW42GM2A0 [UM42R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.0 ~ 12.0 ~ 14.5	5.0 ~ 12.0 ~ 14.5
	Heating	Min.~Rated~Max.	kW	5.5 ~ 13.5 ~ 16.5	5.5 ~ 13.5 ~ 16.5
Power Input	Cooling	Min.~Rated~Max.	kW	0.85 ~ 3.50 ~ 4.68	0.88 ~ 3.45 ~ 4.68
	Heating	Min.~Rated~Max.	kW	1.34 ~ 3.75 ~ 4.85	1.41 ~ 3.65 ~ 4.71
Running Current	Cooling	Rated	A	5.1	5.0
	Heating	Rated	A	5.4	5.3
SEER / SCOP			Wh / Wh	6.18 / 4.17	5.56 / 4.00
Seasonal Energy Label		Cooling / Heating	-	A++ / A+	A / A+
Annual Energy Consumption		Cooling / Heating	kWh	689 / 2,732	764 / 2,800

Combination	Outdoor unit			ZUUW42LA0 [UU43WR U30]
	Indoor unit			ZVNW42GM2A0 [UV42R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.0 ~ 12.0 ~ 14.5
	Heating	Min.~Rated~Max.	kW	5.5 ~ 13.5 ~ 16.5
Power Input	Cooling	Min.~Rated~Max.	kW	0.86 ~ 3.65 ~ 4.83
	Heating	Min.~Rated~Max.	kW	1.41 ~ 4.00 ~ 5.32
Running Current	Cooling	Rated	A	5.3
	Heating	Rated	A	5.8
SEER / SCOP			Wh / Wh	5.56 / 4.00
Seasonal Energy Label		Cooling / Heating	-	A / A+
Annual Energy Consumption		Cooling / Heating	kWh	764 / 2,800

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW48LA0 [UU49WR U30]	ZUUW48LA0 [UU49WR U30]
	Indoor unit			ZTNW48GMLA0 [UT48R NM0]	ZBNW48GM3A0 [UM48R N30]
Capacity	Cooling	Min.~Rated~Max.	kW	5.5 ~ 13.4 ~ 16.0	5.5 ~ 13.4 ~ 16.0
	Heating	Min.~Rated~Max.	kW	6.1 ~ 15.5 ~ 18.0	6.1 ~ 15.5 ~ 18.0
Power Input	Cooling	Min.~Rated~Max.	kW	0.96 ~ 4.35 ~ 5.71	0.95 ~ 4.00 ~ 5.16
	Heating	Min.~Rated~Max.	kW	1.61 ~ 4.82 ~ 5.81	1.61 ~ 4.40 ~ 5.29
Running Current	Cooling	Rated	A	6.3	5.8
	Heating	Rated	A	7.0	6.4
SEER / SCOP			Wh / Wh	5.87 / 4.04	5.51 / 3.96
Seasonal Energy Label		Cooling / Heating	-	-	-
Annual Energy Consumption		Cooling / Heating	kWh	809 / 3,255	853 / 3,338

Combination	Outdoor unit			ZUUW48LA0 [UU49WR U30]
	Indoor unit			ZVNW48GM2A0 [UV48R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.5 ~ 13.4 ~ 16.0
	Heating	Min.~Rated~Max.	kW	6.1 ~ 15.5 ~ 18.0
Power Input	Cooling	Min.~Rated~Max.	kW	0.96 ~ 4.15 ~ 5.33
	Heating	Min.~Rated~Max.	kW	1.61 ~ 4.90 ~ 6.00
Running Current	Cooling	Rated	A	6.0
	Heating	Rated	A	7.1
SEER / SCOP			Wh / Wh	5.51 / 3.96
Seasonal Energy Label		Cooling / Heating	-	-
Annual Energy Consumption		Cooling / Heating	kWh	853 / 3,338

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4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ZUUW60LA0 [UU61WR U30]	ZUUW60LA0 [UU61WR U30]
	Indoor unit			ZTNW60GMLA0 [UT60R NM0]	ZBNW60GM3A0 [UM60R N30]
Capacity	Cooling	Min.~Rated~Max.	kW	5.9 ~ 14.6 ~ 16.3	5.9 ~ 15.0 ~ 16.3
	Heating	Min.~Rated~Max.	kW	6.8 ~ 16.9 ~ 18.7	6.8 ~ 16.8 ~ 18.7
Power Input	Cooling	Min.~Rated~Max.	kW	1.07 ~ 5.38 ~ 6.52	1.02 ~ 4.75 ~ 5.43
	Heating	Min.~Rated~Max.	kW	1.20 ~ 5.60 ~ 6.68	1.74 ~ 4.80 ~ 5.84
Running Current	Cooling	Rated	A	7.8	6.9
	Heating	Rated	A	8.1	6.9
SEER / SCOP			Wh / Wh	5.57 / 3.92	5.45 / 3.92
Seasonal Energy Label		Cooling / Heating	-	-	-
Annual Energy Consumption		Cooling / Heating	kWh	929 / 3,338	972 / 3,338

Combination	Outdoor unit			ZUUW60LA0 [UU61WR U30]
	Indoor unit			ZVNW60GM2A0 [UV60R N20]
Capacity	Cooling	Min.~Rated~Max.	kW	5.7 ~ 14.4 ~ 15.7
	Heating	Min.~Rated~Max.	kW	6.8 ~ 16.8 ~ 18.7
Power Input	Cooling	Min.~Rated~Max.	kW	1.02 ~ 4.90 ~ 5.61
	Heating	Min.~Rated~Max.	kW	1.84 ~ 5.55 ~ 6.68
Running Current	Cooling	Rated	A	7.1
	Heating	Rated	A	8.0
SEER / SCOP			Wh / Wh	5.45 / 3.92
Seasonal Energy Label		Cooling / Heating	-	-
Annual Energy Consumption		Cooling / Heating	kWh	933 / 3,338

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

■ Outdoor Unit Specifiactions

◆ 1Phase Inverter

Model Name			Unit	ZUUW09GA0 [UU09WR UL0]	ZUUW12GA0 [UU12WR UL0]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm²	3C × 2.5	3C × 2.5
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W x H x D	mm	770 × 545 × 288	770 × 545 × 288
	Shipping	W x H x D	mm	920 x 585 x 388	920 x 585 x 388
Weight	Net		kg	33.8	33.8
	Shipping		kg	36.2	36.2
Compressor	Type		-	Twin Rotary	Twin Rotary
	Model		Model x No.	DAT156MAD × 1	DAT156MAD × 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	1,500 × 1	1,500 × 1
Refrigerant	Type		-	R32	R32
	GWP (Global Warming Potential)		-	675	675
	Precharged Amount		g	900	900
	t-CO_2 eq.		-	0.61	0.61
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	20	20
Refrigerant Oil	Type		-	FW68D	FW68D
	Charged volume		cc x No.	400 × 1	400 × 1
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 × 24 × 14) × 1	(2 × 24 × 14) × 1
Fan	Type		-	Axial	Axial
	Air Flow Rate	Rated	m³/min x No.	28 × 1	28 × 1
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	43.0 × 1	43.0 × 1
Sound Pressure Level	Cooling	Rated	dB(A)	47	49
	Heating	Rated	dB(A)	50	52
Sound Power Level	Cooling	Rated	dB(A)	65	65
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
Piping Length		Rated	m	5.0	5.0
		Max.	m	20	20
Maximum Height Difference (ODU ~ IDU)		Max.	m	15	15

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3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Model Name			Unit	ZUUW18GA0 [UU18WR U20]	ZUUW24GA0 [UU24WR U40]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm²	3C × 2.5	3C × 2.5
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W x H x D	mm	870 x 650 x 330	950 × 834 × 330
	Shipping	W x H x D	mm	1,026 x 693 x 446	1,065 x 918 x 461
Weight	Net		kg	44.8	56.1
	Shipping		kg	49.8	61.9
Compressor	Type		-	Twin Rotary	Twin Rotary
	Model		Model x No.	DKT208MAB × 1	DKT208MAB × 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	1,500 × 1	1,500 × 1
Refrigerant	Type		-	R32	R32
	GWP (Global Warming Potential)		-	675	675
	Precharged Amount		g	1,100	1,600
	t-CO_2 eq.		-	0.74	1.08
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	20	35
Refrigerant Oil	Type		-	FW68D	FW68D
	Charged volume		cc x No.	670 × 1	670 × 1
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 × 28 × 14) × 1	(2 × 38 × 14) × 1
Fan	Type		-	Axial	Axial
	Air Flow Rate	Rated	m³/min x No.	50 × 1	58 × 1
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	85.4 × 1	124 × 1
Sound Pressure Level	Cooling	Rated	dB(A)	47	48
	Heating	Rated	dB(A)	52	52
Sound Power Level	Cooling	Rated	dB(A)	63	67
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
Piping Length		Rated	m	5.0	5.0
		Max.	m	30	50
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Model Name			Unit	ZUUW36GA0 [UU36WR U30]	ZUUW42GA0 [UU42WR U30]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm²	3C x 6.0	3C x 6.0
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W x H x D	mm	950 x 1,380 x 330	950 x 1,380 x 330
	Shipping	W x H x D	mm	1,140 x 1,553 x 466	1,140 x 1,553 x 466
Weight	Net		kg	87.5	87.5
	Shipping		kg	101.5	101.5
Compressor	Type		-	LG Inverter Scroll	LG Inverter Scroll
	Model		Model x No.	RJB036MAB x 1	RJB036MAB x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	3,200 x 1	3,200 x 1
Refrigerant	Type		-	R32	R32
	GWP (Global Warming Potential)		-	675	675
	Precharged Amount		g	3,000	3,000
	t-CO_2 eq.		-	2.03	2.03
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
Refrigerant Oil	Type		-	FW68D	FW68D
	Charged volume		cc x No.	1,000 x 1	1,000 x 1
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 x 32 x 14) x 2	(2 x 32 x 14) x 2
Fan	Type		-	Propeller	Propeller
	Air Flow Rate	Rated	m³/min x No.	55 x 2	55 x 2
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	124 x 2	124 x 2
Sound Pressure Level	Cooling	Rated	dB(A)	52	52
	Heating	Rated	dB(A)	54	54
Sound Power Level	Cooling	Rated	dB(A)	66	67
	Heating	Rated	dB(A)	70	71
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
Piping Length		Rated	m	5	5
		Max.	m	85	85
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Model Name			Unit	ZUUW48GA0 [UU48WR U30]	ZUUW60GA0 [UU60WR U30]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm²	3C x 6.0	3C x 6.0
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W x H x D	mm	950 x 1,380 x 330	950 x 1,380 x 330
	Shipping	W x H x D	mm	1,140 x 1,553 x 466	1,140 x 1,553 x 466
Weight	Net		kg	87.5	87.5
	Shipping		kg	101.5	101.5
Compressor	Type		-	LG Inverter Scroll	LG Inverter Scroll
	Model		Model x No.	RJB036MAB x 1	RJB036MAB x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	3,200 x 1	3,200 x 1
Refrigerant	Type		-	R32	R32
	GWP (Global Warming Potential)		-	675	675
	Precharged Amount		g	3,000	3,000
	t-CO_2 eq.		-	2.03	2.03
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
Refrigerant Oil	Type		-	FW68D	FW68D
	Charged volume		cc x No.	1,000 x 1	1,000 x 1
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 x 32 x 14) x 2	(2 x 32 x 14) x 2
Fan	Type		-	Propeller	Propeller
	Air Flow Rate	Rated	m³/min x No.	55 x 2	55 x 2
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	124 x 2	124 x 2
Sound Pressure Level	Cooling	Rated	dB(A)	52	52
	Heating	Rated	dB(A)	54	54
Sound Power Level	Cooling	Rated	dB(A)	68	68
	Heating	Rated	dB(A)	72	72
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
Piping Length		Rated	m	5	5
		Max.	m	85	85
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

◆ 3 Phase Inverter

Model Name			Unit	ZUUW36LA0 [UU37WR U30]	ZUUW42LA0 [UU43WR U30]
Power Supply			V , Ø , Hz	380-415 , 3 , 50	380-415 , 3 , 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm²	5C x 2.5	5C x 2.5
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W x H x D	mm	950 x 1,380 x 330	950 x 1,380 x 330
	Shipping	W x H x D	mm	1,140 x 1,553 x 466	1,140 x 1,553 x 466
Weight	Net		kg	87.5	87.5
	Shipping		kg	101.5	101.5
Compressor	Type		-	LG Inverter Scroll	LG Inverter Scroll
	Model		Model x No.	RJB036MAB x 1	RJB036MAB x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	3,200 x 1	3,200 x 1
Refrigerant	Type		-	R32	R32
	GWP (Global Warming Potential)		-	675	675
	Precharged Amount		g	3,000	3,000
	t-CO_2 eq.		-	2.03	2.03
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
Refrigerant Oil	Type		-	FW68D	FW68D
	Charged volume		cc x No.	1,000 x 1	1,000 x 1
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 x 32 x 14) x 2	(2 x 32 x 14) x 2
Fan	Type		-	Propeller	Propeller
	Air Flow Rate	Rated	m³/min x No.	55 x 2	55 x 2
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	124 x 2	124 x 2
Sound Pressure Level	Cooling	Rated	dB(A)	52	52
	Heating	Rated	dB(A)	54	54
Sound Power Level	Cooling	Rated	dB(A)	66	67
	Heating	Rated	dB(A)	70	71
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
Piping Length		Rated	m	5	5
		Max.	m	85	85
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

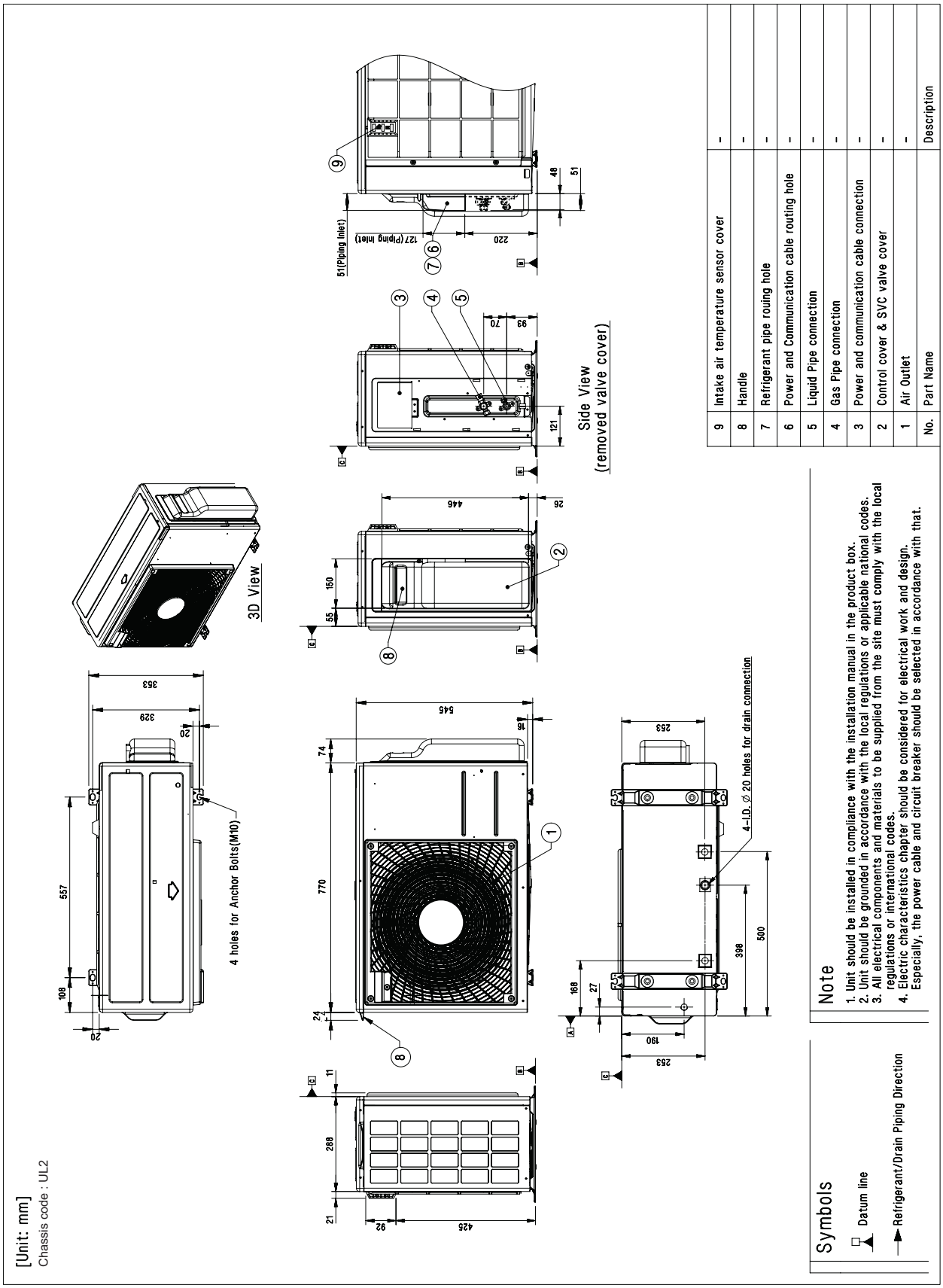
Model Name			Unit	ZUUW48LA0 [UU49WR U30]	ZUUW60LA0 [UU61WR U30]
Power Supply			V , Ø , Hz	380-415 , 3 , 50	380-415 , 3 , 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm²	5C x 2.5	5C x 2.5
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W x H x D	mm	950 x 1,380 x 330	950 x 1,380 x 330
	Shipping	W x H x D	mm	1,140 x 1,553 x 466	1,140 x 1,553 x 466
Weight	Net		kg	87.5	87.5
	Shipping		kg	101.5	101.5
Compressor	Type		-	LG Inverter Scroll	LG Inverter Scroll
	Model		Model x No.	RJB036MAB x 1	RJB036MAB x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	3,200 x 1	3,200 x 1
Refrigerant	Type		-	R32	R32
	GWP (Global Warming Potential)		-	675	675
	Precharged Amount		g	3,000	3,000
	t-CO_2 eq.		-	2.03	2.03
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
Refrigerant Oil	Type		-	FW68D	FW68D
	Charged volume		cc x No.	1,000 x 1	1,000 x 1
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 x 32 x 14) x 2	(2 x 32 x 14) x 2
Fan	Type		-	Propeller	Propeller
	Air Flow Rate	Rated	m³/min x No.	55 x 2	55 x 2
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	124 x 2	124 x 2
Sound Pressure Level	Cooling	Rated	dB(A)	52	52
	Heating	Rated	dB(A)	54	54
Sound Power Level	Cooling	Rated	dB(A)	68	68
	Heating	Rated	dB(A)	72	72
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
Piping Length		Rated	m	5	5
		Max.	m	85	85
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Power factor could vary less than ±1% according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power levIndoorel is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
5. Performances are based on the following conditions :
   - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
   - *Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
   - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
6. This product contains Fluorinated greenhouse gases.

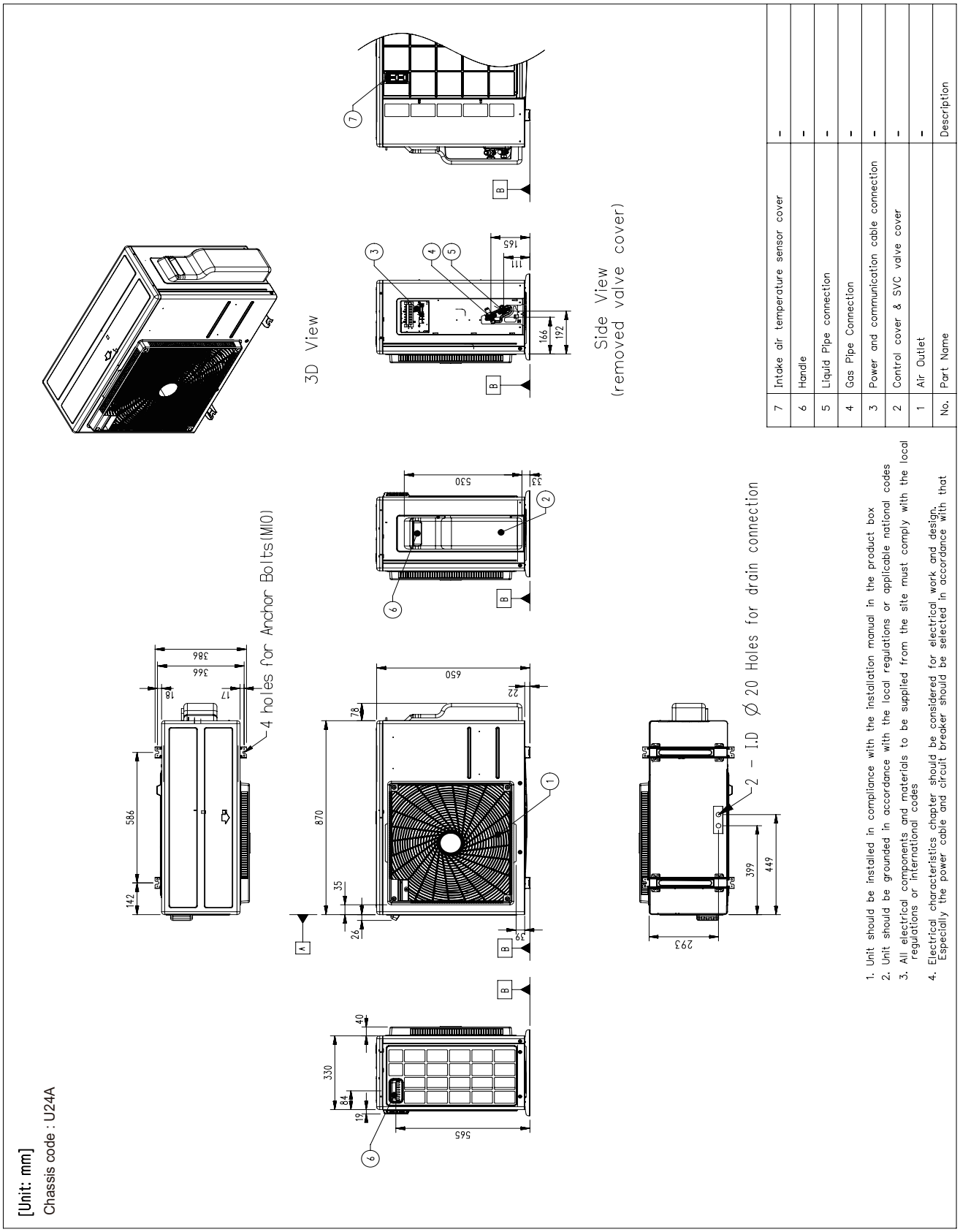
3. Dimensions

ZUUW09GA0 [UU09WR UL0] / ZUUW12GA0 [UU12WR UL0]



3. Dimensions

ZUUW18GA0 [UU18WR U20]

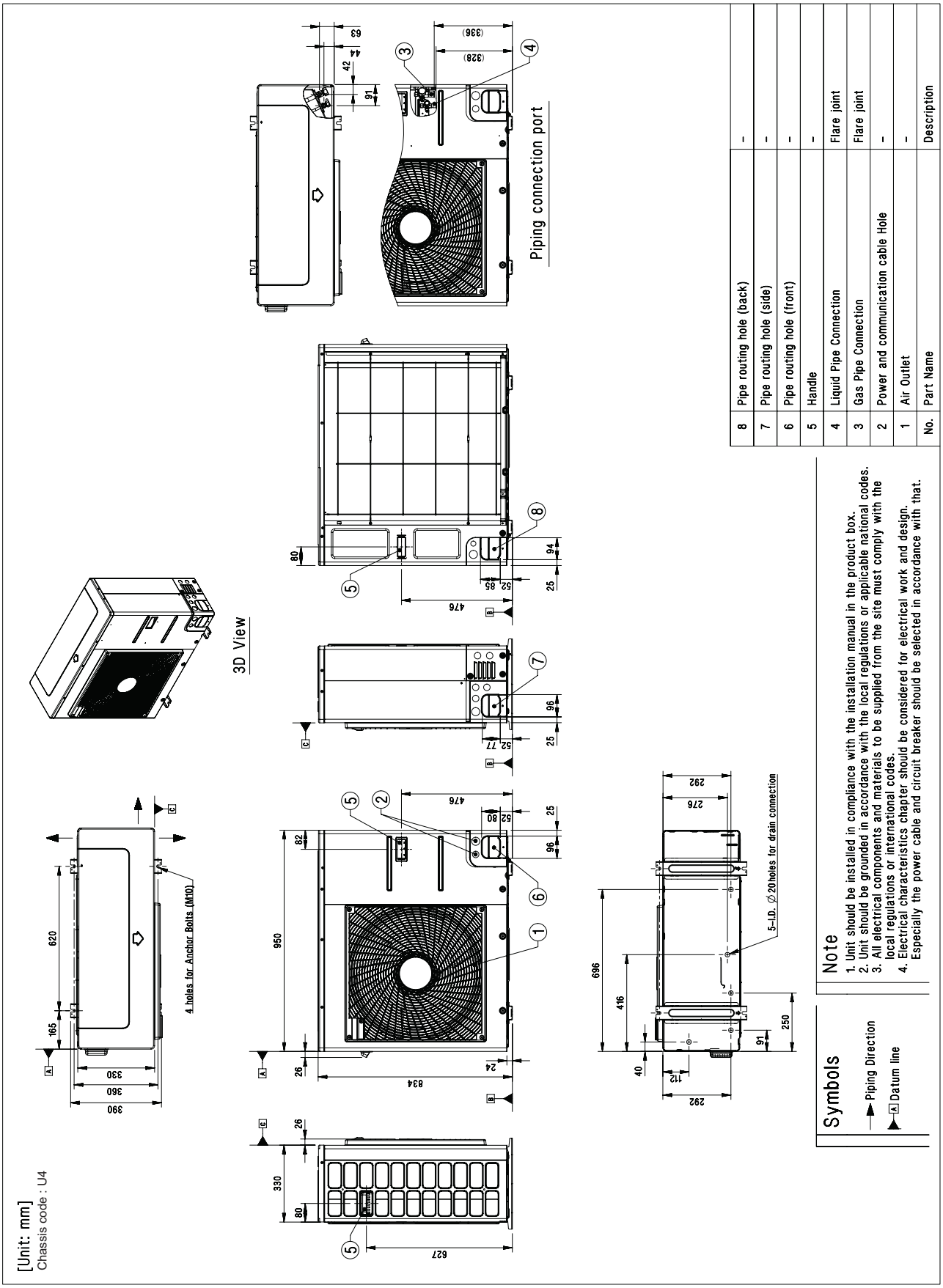


No.	Part Name	Description
7	Intake air temperature sensor cover	-
6	Handle	-
5	Liquid Pipe connection	-
4	Gas Pipe Connection	-
3	Power and communication cable connection	-
2	Control cover & SVC valve cover	-
1	Air Outlet	-

1. Unit should be installed in compliance with the installation manual in the product box
2. Unit should be grounded in accordance with the local regulations or applicable national codes
3. All electrical components and materials to be supplied from the site must comply with the local regulations or international codes
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that

3. Dimensions

ZUUW24GA0 [UU24WR U40]



No.	Part Name	Description
8	Pipe routing hole (back)	–
7	Pipe routing hole (side)	–
6	Pipe routing hole (front)	–
5	Handle	–
4	Liquid Pipe Connection	Flare joint
3	Gas Pipe Connection	Flare joint
2	Power and communication cable Hole	–
1	Air Outlet	–

Symbols

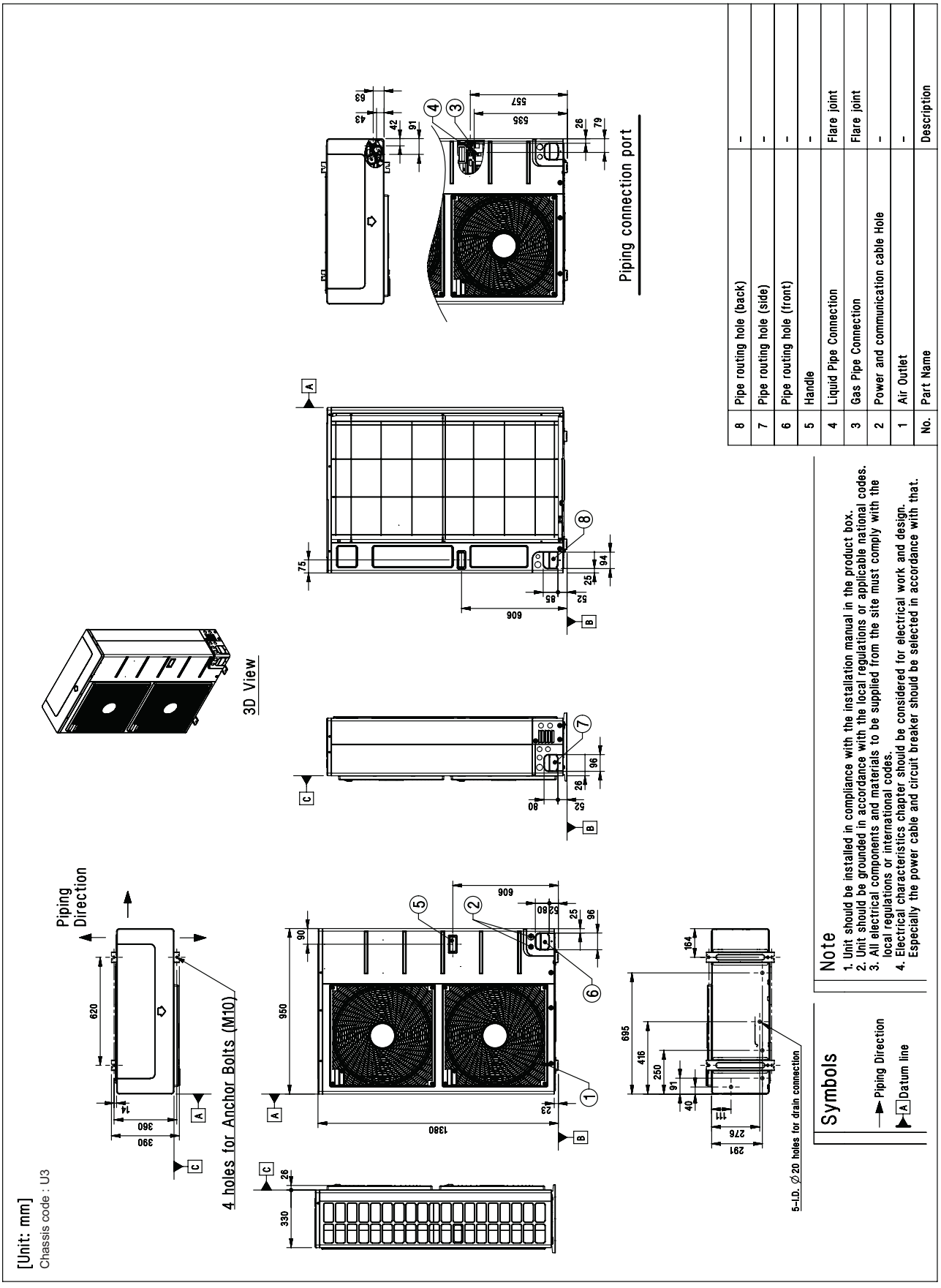
- Piping Direction
- Datum line

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied from the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.

3. Dimensions

ZUUW36GA0 [UU36WR U30] /ZUUW42GA0 [UU42WR U30] / ZUUW48GA0 [UU48WR U30] ZUUW60GA0 [UU60WR U30] / ZUUW36LA0 [UU37WR U30] / ZUUW42LA0 [UU43WR U30] ZUUW48LA0 [UU49WR U30] ZUUW60LA0 [UU61WR U30]



No.	Part Name	Description
8	Pipe routing hole (back)	-
7	Pipe routing hole (side)	-
6	Pipe routing hole (front)	-
5	Handle	-
4	Liquid Pipe Connection	Flare joint
3	Gas Pipe Connection	Flare joint
2	Power and communication cable Hole	-
1	Air Outlet	-

Symbols

Piping Direction

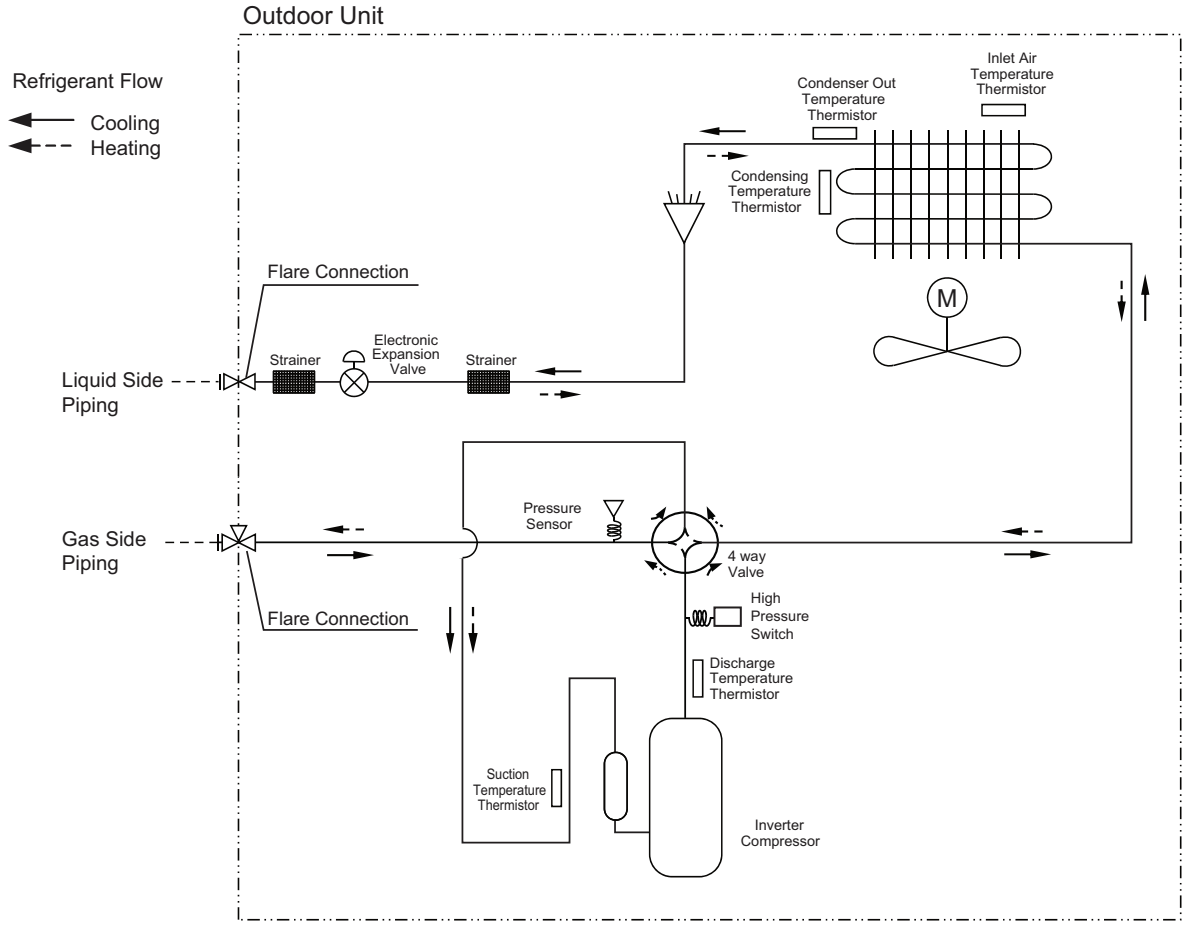
A Datum line

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied from the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.

4. Piping Diagrams

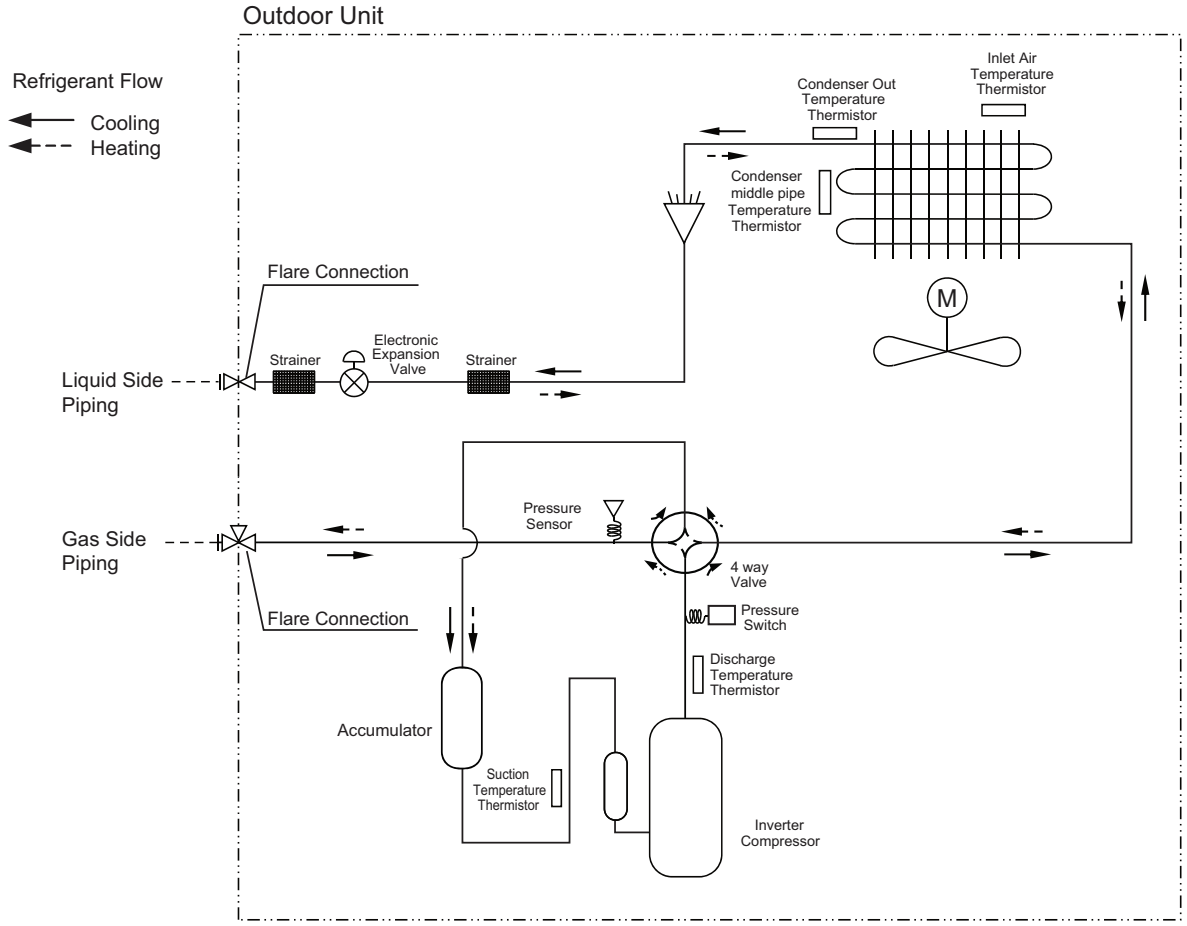
◆ ZUUW09GA0 [UU09WR UL0], ZUUW12GA0 [UU12WR UL0]



Description	PCB Connector
Suction Temperature Thermistor	CN_SUCTION
Discharge Temperature Thermistor	CN_DISCHARGE
Condenser Out Temperature Thermistor	CN_C-PIPE
Inlet Air Temperature Thermistor	CN_AIR
Condensing Temperature Thermistor	CN_MID
Pressure Sensor	CN_H-PRESSURE
Pressure switch	CN_PRESS

4. Piping Diagrams

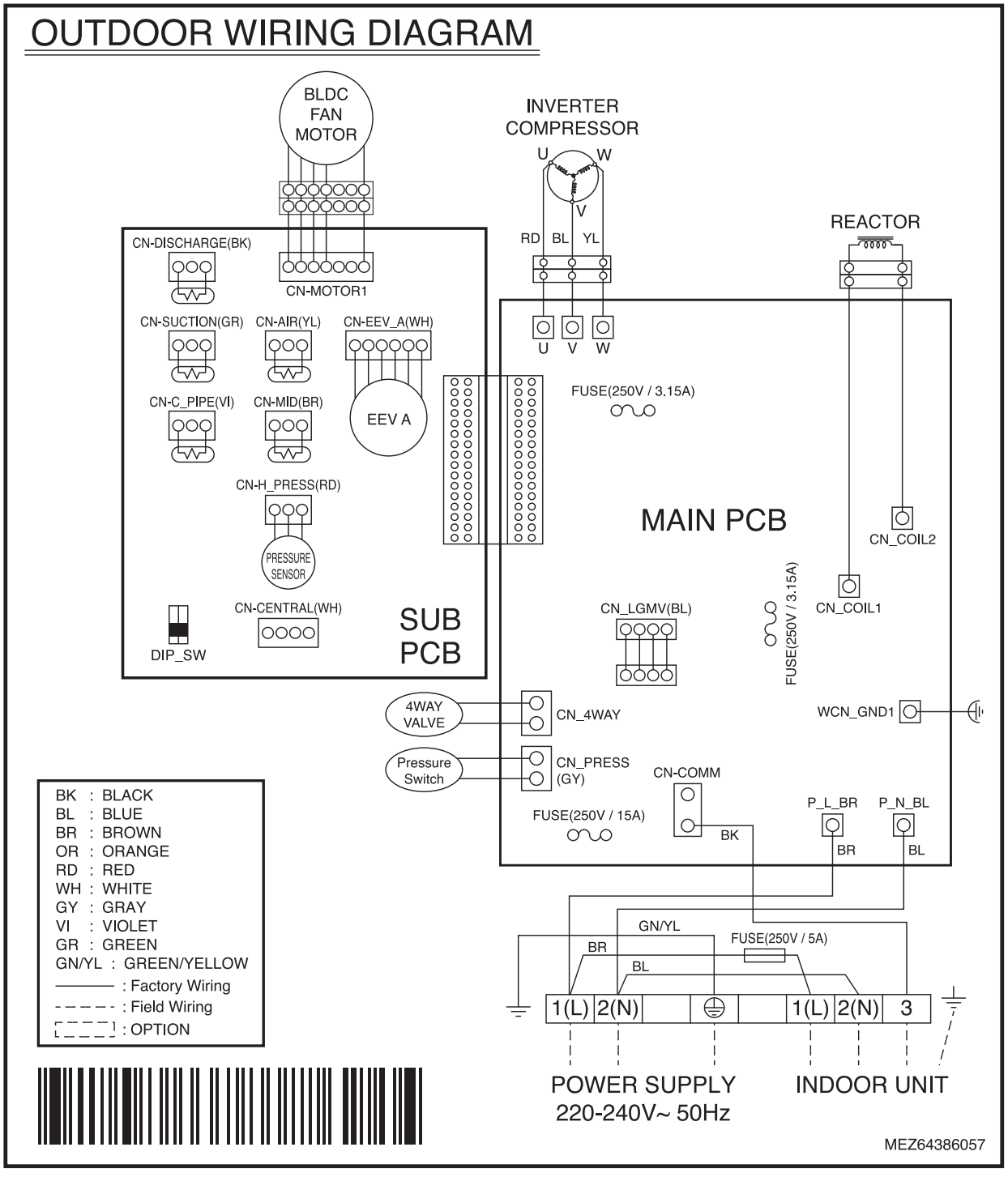
◆ **ZUUW18GA0 [UU18WR U20], ZUUW24GA0 [UU24WR U40], ZUUW36GA0 [UU36WR U30], ZUUW36LA0 [UU37WR U30], ZUUW42GA0 [UU42WR U30], ZUUW42LA0 [UU43WR U30], ZUUW48GA0 [UU48WR U30], ZUUW48LA0 [UU49WR U30], ZUUW60GA0 [UU60WR U30], ZUUW60LA0 [UU61WR U30]**



Description	PCB Connector		
	18k	**24k**	**36/42/48/60k**
Electronic Expansion Valve	CN_EEV1	CN_EEV1	CN_EEV1
Suction Temperature Thermistor	CN_SUCTION	CN_SUCTION	CN_SUCTION
Discharge Temperature Thermistor	CN_DISCHARGE	CN_DISCHARGE	CN_DISCHA
Condenser Out Temperature Thermistor	CN_C_PIPE	CN_C_PIPE	CN_C_PIPE
Inlet Air Temperature Thermistor	CN_AIR	CN_AIR	CN_AIR
Condensing Temperature Thermistor	CN_MID	CN_MID	CN_MID
Pressure sensor	CN_H_PRESS	CN_H_PRESS	CN_H_PRESS
Pressure switch	CN_PRESSURE	CN_PRESS	CN_PRESS

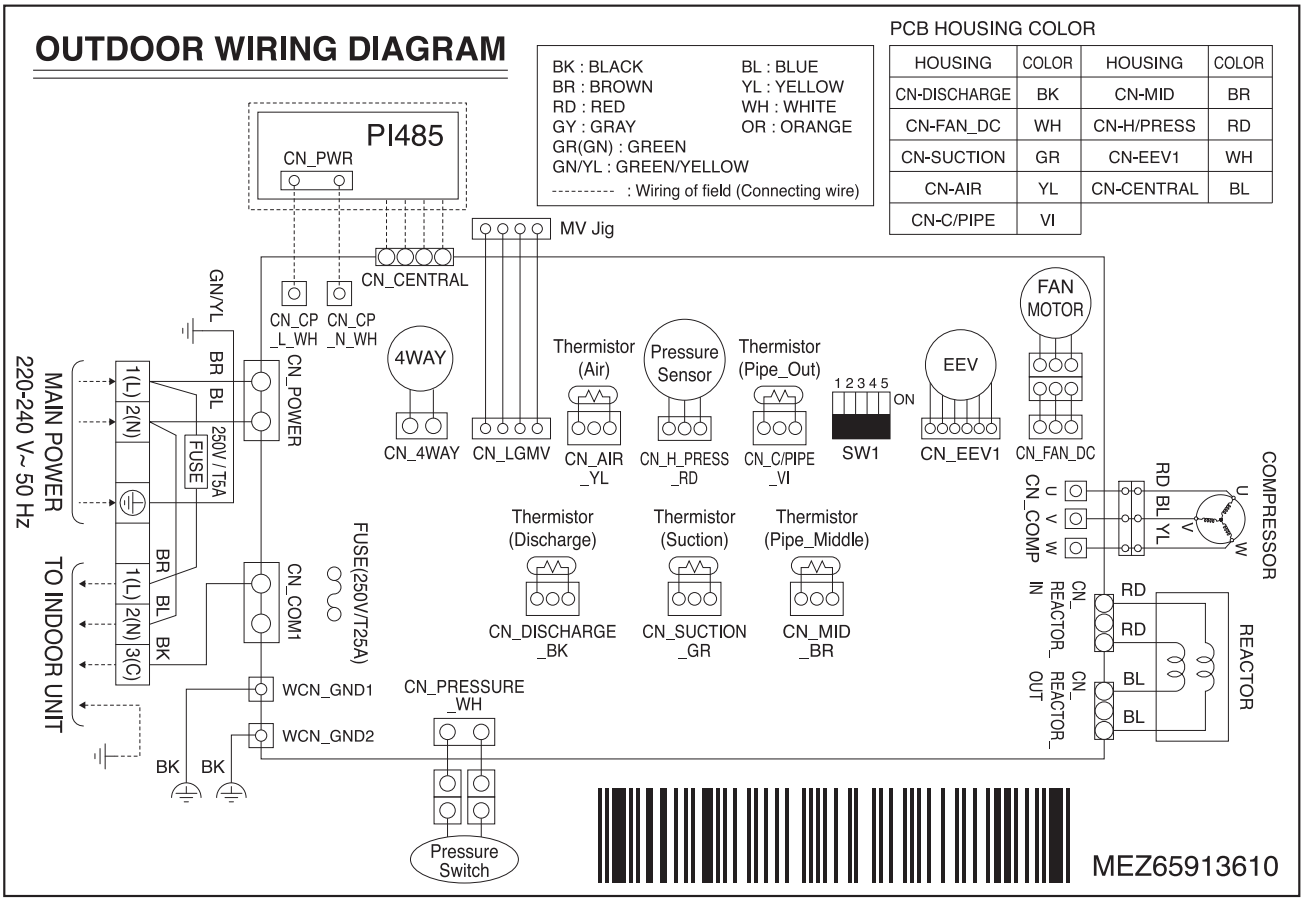
5. Wiring Diagrams

◆ **ZUUW09GA0 [UU09WR UL0], ZUUW12GA0 [UU12WR UL0]**



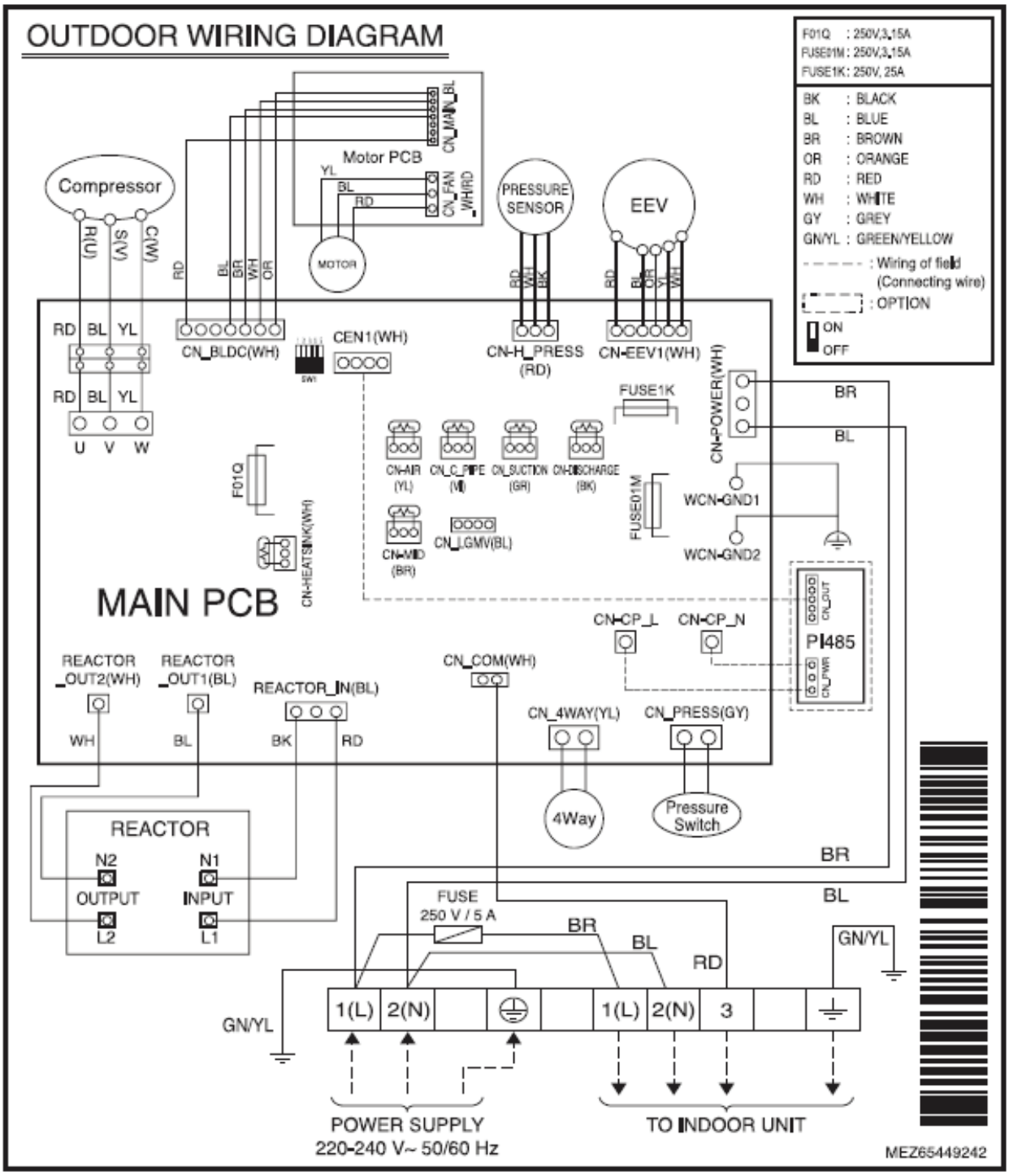
5. Wiring Diagrams

◆ ZUUW18GA0 [UU18WR U20]



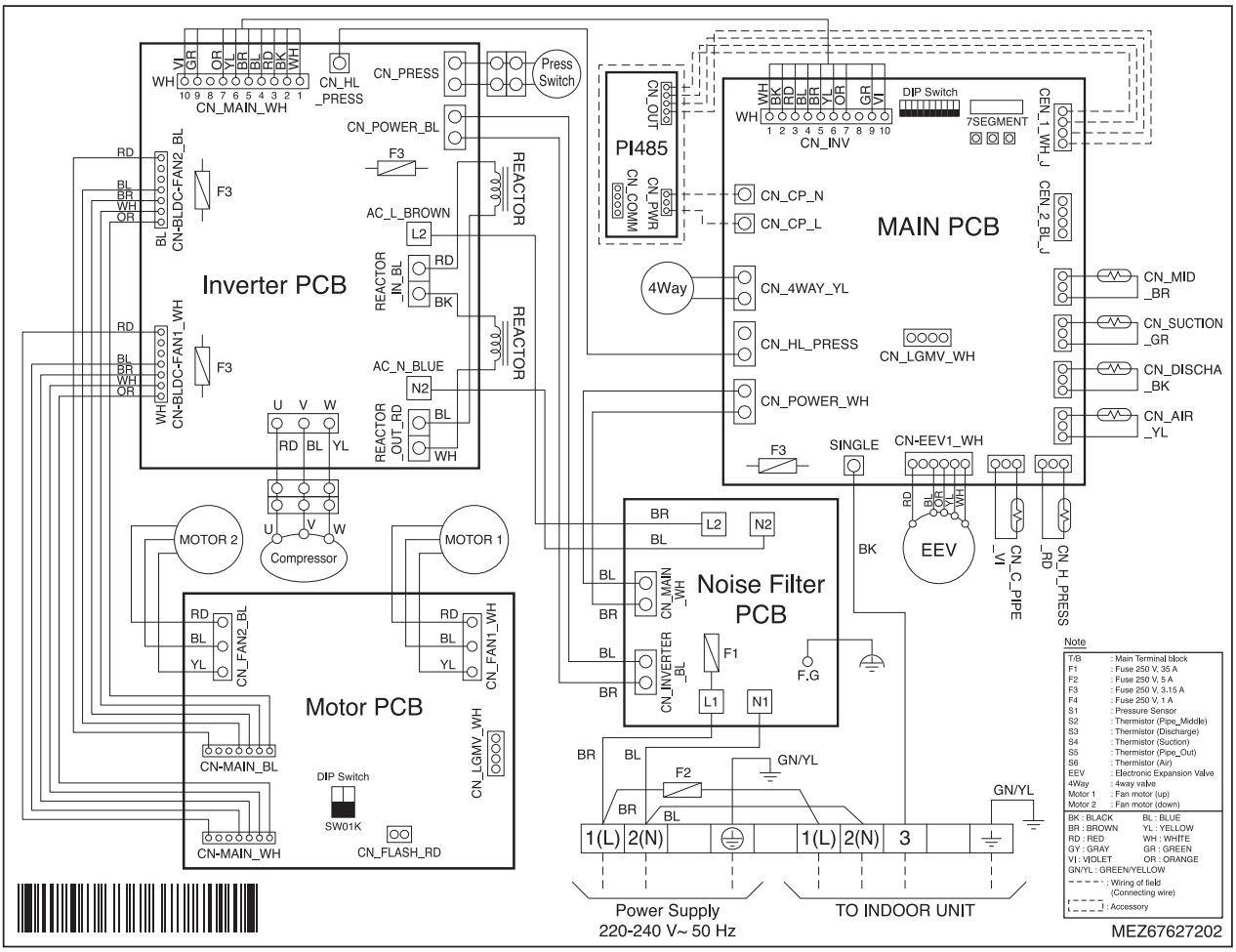
5. Wiring Diagrams

◆ **ZUUW24GA0 [UU24WR U40]**



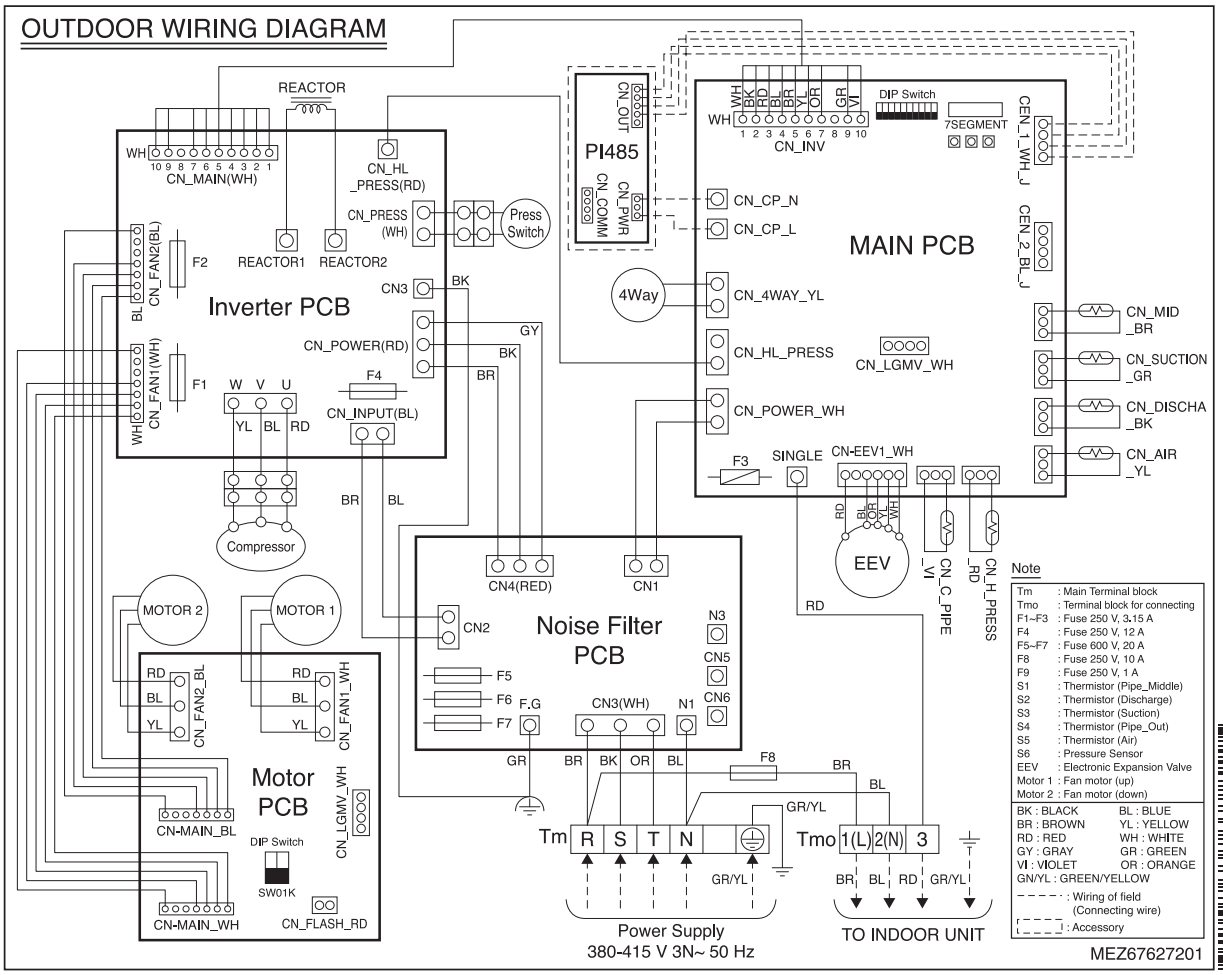
5. Wiring Diagrams

◆ ZUUW36GA0 [UU36WR U30], ZUUW42GA0 [UU42WR U30], ZUUW48GA0 [UU48WR U30], ZUUW60GA0 [UU60WR U30]



5. Wiring Diagrams

◆ ZUUW36LA0 [UU37WR U30], ZUUW42LA0 [UU43WR U30], ZUUW48LA0 [UU49WR U30], ZUUW60LA0 [UU61WR U30]



6. Capacity Tables

6.1 ZUUW09GA0 [UU09WR UL0]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	1.75	1.42	0.30	2.19	1.67	0.40	2.53	1.93	0.49	2.79	2.05	0.51	3.04	2.02	0.53	3.24	1.99	0.53
25.0	1.66	1.38	0.33	2.10	1.63	0.43	2.44	1.88	0.53	2.69	2.01	0.55	2.95	1.97	0.57	3.14	1.95	0.57
32.0	1.52	1.32	0.38	1.97	1.57	0.48	2.30	1.82	0.59	2.56	1.95	0.61	2.81	1.91	0.63	3.01	1.89	0.63
35.0	1.47	1.30	0.39	1.91	1.55	0.50	2.24	1.80	0.61	2.50	1.93	0.63	2.76	1.89	0.65	2.95	1.86	0.65
40.0	1.37	1.26	0.43	1.81	1.51	0.53	2.15	1.76	0.65	2.40	1.88	0.67	2.66	1.85	0.69	2.85	1.82	0.69
43.0	1.32	1.23	0.45	1.76	1.48	0.55	2.09	1.73	0.67	2.35	1.86	0.69	2.60	1.82	0.71	2.80	1.80	0.72
46.0	1.26	1.20	0.47	1.70	1.46	0.57	2.04	1.71	0.70	2.32	1.86	0.72	2.58	1.82	0.74	2.77	1.79	0.74
48.0	1.22	1.19	0.48	1.66	1.44	0.58	2.00	1.69	0.79	2.30	1.85	0.81	2.56	1.82	0.83	2.76	1.79	0.84

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	1.79	0.57	1.77	0.62	1.76	0.67	1.74	0.73	1.73	0.78
-15.0	2.20	0.67	2.19	0.72	2.17	0.77	2.16	0.82	2.14	0.88
-10.0	2.62	0.77	2.60	0.82	2.59	0.87	2.57	0.92	2.56	0.97
-5.0	3.03	0.87	3.02	0.92	3.00	0.97	2.88	0.92	2.76	0.88
0.0	3.32	0.97	3.16	0.92	3.00	0.87	2.88	0.83	2.76	0.78
6.0	3.32	0.83	3.16	0.79	3.00	0.75	2.88	0.71	2.76	0.68
10.0	3.32	0.77	3.16	0.72	3.00	0.67	2.88	0.64	2.76	0.60
15.0	3.32	0.67	3.16	0.62	3.00	0.57	2.88	0.54	2.76	0.51
18.0	3.32	0.61	3.16	0.56	3.00	0.51	2.88	0.48	2.76	0.46

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW09GRLA0 [CT09R NR0]		ZBNW09GL2A0 [CL09R N20]	
	TC	PI	TC	PI
Max.	1.15	1.60	1.28	1.68
Rated	1.00	1.00	1.00	1.02

◆ Heating

Indoor Unit	ZTNW09GRLA0 [CT09R NR0]		ZBNW09GL2A0 [CL09R N20]	
	TC	PI	TC	PI
Max.	1.15	1.60	1.20	1.71
Rated	1.00	1.00	1.07	0.99

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.2 ZUUW12GA0 [UU12WR UL0]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	2.38	1.79	0.46	2.99	2.10	0.61	3.44	2.42	0.76	3.79	2.57	0.79	4.14	2.53	0.82	4.40	2.50	0.82
25.0	2.26	1.73	0.51	2.86	2.05	0.66	3.31	2.36	0.82	3.66	2.52	0.85	4.01	2.47	0.88	4.27	2.44	0.88
32.0	2.07	1.66	0.58	2.67	1.97	0.73	3.13	2.29	0.90	3.48	2.45	0.93	3.82	2.40	0.96	4.09	2.37	0.97
35.0	2.00	1.63	0.61	2.60	1.94	0.76	3.05	2.26	0.94	3.40	2.41	0.97	3.75	2.37	1.00	4.01	2.34	1.00
40.0	1.87	1.57	0.66	2.47	1.89	0.81	2.92	2.20	1.00	3.27	2.36	1.03	3.62	2.32	1.06	3.88	2.29	1.07
43.0	1.79	1.54	0.69	2.39	1.86	0.84	2.85	2.17	1.04	3.19	2.33	1.07	3.54	2.28	1.10	3.80	2.25	1.10
46.0	1.71	1.51	0.72	2.31	1.83	0.88	2.77	2.14	1.07	3.15	2.33	1.10	3.51	2.28	1.13	3.77	2.25	1.14
48.0	1.66	1.49	0.74	2.26	1.80	0.90	2.72	2.12	1.22	3.13	2.32	1.25	3.48	2.28	1.28	3.75	2.25	1.29

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	2.39	0.85	2.36	0.93	2.34	1.00	2.33	1.09	2.31	1.17
-15.0	2.94	1.00	2.92	1.08	2.90	1.15	2.88	1.23	2.86	1.31
-10.0	3.49	1.15	3.47	1.22	3.45	1.30	3.43	1.37	3.41	1.44
-5.0	4.04	1.30	4.02	1.37	4.00	1.44	3.84	1.38	3.68	1.31
0.0	4.43	1.44	4.21	1.37	4.00	1.30	3.84	1.23	3.68	1.17
6.0	4.43	1.23	4.21	1.18	4.00	1.12	3.84	1.06	3.68	1.01
10.0	4.43	1.15	4.21	1.08	4.00	1.00	3.84	0.95	3.68	0.90
15.0	4.43	1.00	4.21	0.93	4.00	0.85	3.84	0.81	3.68	0.76
18.0	4.43	0.91	4.21	0.84	4.00	0.77	3.84	0.72	3.68	0.68

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW12GRLA0 [CT12R NR0]		ZBNW12GL2A0 [CL12R N20]	
	TC	PI	TC	PI
Max.	1.15	1.60	1.15	1.64
Rated	1.00	1.00	1.00	1.02

◆ Heating

Indoor Unit	ZTNW12GRLA0 [CT12R NR0]		ZBNW12GL2A0 [CL12R N20]	
	TC	PI	TC	PI
Max.	1.15	1.60	1.18	1.43
Rated	1.00	1.00	1.00	0.89

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.3 ZUUW18GA0 [UU18WR U20]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	3.51	2.63	0.74	4.39	3.09	0.98	5.06	3.55	1.22	5.57	3.78	1.27	6.08	3.72	1.32	6.47	3.67	1.32
25.0	3.32	2.55	0.81	4.20	3.01	1.06	4.87	3.47	1.32	5.38	3.71	1.37	5.89	3.64	1.41	6.28	3.59	1.42
32.0	3.05	2.44	0.93	3.93	2.90	1.18	4.60	3.37	1.45	5.11	3.60	1.50	5.62	3.53	1.55	6.01	3.49	1.56
35.0	2.94	2.39	0.98	3.82	2.86	1.23	4.49	3.32	1.51	5.00	3.55	1.56	5.51	3.48	1.61	5.90	3.44	1.62
40.0	2.74	2.31	1.06	3.63	2.78	1.31	4.30	3.24	1.61	4.81	3.47	1.66	5.32	3.41	1.70	5.71	3.36	1.71
43.0	2.63	2.27	1.11	3.51	2.73	1.36	4.18	3.19	1.67	4.69	3.43	1.72	5.21	3.36	1.76	5.59	3.31	1.77
46.0	2.52	2.22	1.16	3.40	2.68	1.41	4.07	3.15	1.73	4.64	3.42	1.77	5.16	3.35	1.82	5.55	3.31	1.83
48.0	2.44	2.19	1.19	3.32	2.65	1.44	3.99	3.12	1.96	4.60	3.42	2.01	5.12	3.35	2.06	5.52	3.31	2.07

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	3.46	1.27	3.43	1.38	3.40	1.48	3.37	1.61	3.34	1.74
-15.0	4.26	1.48	4.23	1.59	4.20	1.70	4.17	1.82	4.15	1.94
-10.0	5.06	1.70	5.03	1.81	5.00	1.92	4.97	2.03	4.95	2.14
-5.0	5.86	1.92	5.83	2.03	5.80	2.14	5.57	2.04	5.34	1.94
0.0	6.42	2.14	6.11	2.03	5.80	1.92	5.57	1.83	5.34	1.74
6.0	6.42	1.83	6.11	1.74	5.80	1.66	5.57	1.58	5.34	1.49
10.0	6.42	1.70	6.11	1.59	5.80	1.48	5.57	1.41	5.34	1.33
15.0	6.42	1.48	6.11	1.38	5.80	1.27	5.57	1.20	5.34	1.13
18.0	6.42	1.35	6.11	1.24	5.80	1.13	5.57	1.07	5.34	1.01

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW18GQLA0 [CT18R NQ0]		ZBNW18GM1A0 [CM18R N10]		ZBNW18GL2A0 [CL18R N20]		ZVNW18GM1A0 [UV18R N10]	
	TC	PI	TC	PI	TC	PI	TC	PI
Max.	1.15	1.60	1.20	1.50	1.20	1.58	1.20	1.42
Rated	1.00	1.00	1.00	0.94	1.00	0.97	1.00	0.88

◆ Heating

Indoor Unit	ZTNW18GQLA0 [CT18R NQ0]		ZBNW18GM1A0 [CM18R N10]		ZBNW18GL2A0 [CL18R N20]		ZVNW18GM1A0 [UV18R N10]	
	TC	PI	TC	PI	TC	PI	TC	PI
Max.	1.17	1.60	1.24	1.54	1.24	1.70	1.09	1.46
Rated	1.00	1.00	1.03	0.96	1.03	1.06	0.90	0.92

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.4 ZUUW24GA0 [UU24WR U40]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.77	3.67	0.92	5.97	4.32	1.22	6.88	4.97	1.52	7.58	5.29	1.58	8.27	5.20	1.64	8.80	5.13	1.65
25.0	4.51	3.56	1.01	5.71	4.21	1.32	6.62	4.86	1.64	7.32	5.18	1.70	8.01	5.09	1.76	8.54	5.03	1.77
32.0	4.15	3.41	1.15	5.35	4.06	1.47	6.26	4.71	1.81	6.96	5.03	1.87	7.65	4.94	1.93	8.18	4.87	1.94
35.0	3.99	3.35	1.22	5.19	3.99	1.53	6.11	4.64	1.88	6.80	4.96	1.94	7.49	4.87	2.00	8.02	4.81	2.01
40.0	3.73	3.24	1.32	4.93	3.88	1.63	5.85	4.53	2.00	6.54	4.86	2.06	7.24	4.76	2.12	7.76	4.70	2.13
43.0	3.58	3.17	1.38	4.78	3.82	1.69	5.69	4.47	2.07	6.39	4.79	2.13	7.08	4.70	2.19	7.61	4.63	2.20
46.0	3.42	3.11	1.44	4.62	3.75	1.75	5.54	4.40	2.15	6.31	4.78	2.21	7.01	4.69	2.26	7.55	4.63	2.28
48.0	3.32	3.06	1.48	4.52	3.71	1.79	5.43	4.36	2.44	6.26	4.78	2.50	6.97	4.69	2.57	7.50	4.62	2.58

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	4.77	1.53	4.73	1.66	4.69	1.79	4.65	1.94	4.61	2.09
-15.0	5.88	1.79	5.83	1.92	5.79	2.05	5.75	2.19	5.72	2.34
-10.0	6.98	2.05	6.94	2.18	6.90	2.32	6.86	2.45	6.82	2.58
-5.0	8.08	2.32	8.04	2.45	8.00	2.58	7.68	2.46	7.36	2.34
0.0	8.86	2.58	8.43	2.45	8.00	2.32	7.68	2.20	7.36	2.09
6.0	8.86	2.20	8.43	2.10	8.00	2.00	7.68	1.90	7.36	1.80
10.0	8.86	2.05	8.43	1.92	8.00	1.79	7.68	1.70	7.36	1.61
15.0	8.86	1.79	8.43	1.66	8.00	1.53	7.68	1.44	7.36	1.36
18.0	8.86	1.63	8.43	1.50	8.00	1.37	7.68	1.29	7.36	1.22

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW24GPLA0 [CT24R NP0]		ZBNW24GM1A0 [CM24R N10]		ZBNW24GL3A0 [CL24R N30]		ZVNW24GM1A0 [UV24R N10]	
	TC	PI	TC	PI	TC	PI	TC	PI
Max.	1.15	1.41	1.15	1.51	1.13	1.56	1.10	1.43
Rated	1.00	1.00	1.00	1.05	1.04	1.11	1.00	1.02

◆ Heating

Indoor Unit	ZTNW24GPLA0 [CT24R NP0]		ZBNW24GM1A0 [CM24R N10]		ZBNW24GL3A0 [CL24R N30]		ZVNW24GM1A0 [UV24R N10]	
	TC	PI	TC	PI	TC	PI	TC	PI
Max.	1.10	1.60	1.04	1.87	1.03	1.65	1.04	1.65
Rated	1.00	1.00	0.94	1.10	0.94	1.03	0.94	1.10

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.5 ZUUW36GA0 [UU36WR U30] / ZUUW36LA0 [UU37WR U30]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	6.66	5.66	1.18	8.34	6.65	1.55	9.62	7.65	1.93	10.59	8.15	2.01	11.56	8.01	2.08	12.29	7.91	2.10
25.0	6.30	5.49	1.29	7.98	6.49	1.68	9.25	7.48	2.09	10.22	7.98	2.16	11.19	7.84	2.24	11.93	7.74	2.25
32.0	5.79	5.25	1.47	7.47	6.25	1.87	8.75	7.25	2.30	9.72	7.75	2.38	10.69	7.60	2.45	11.42	7.51	2.47
35.0	5.58	5.15	1.55	7.25	6.15	1.94	8.53	7.15	2.40	9.50	7.65	2.47	10.47	7.50	2.54	11.21	7.41	2.56
40.0	5.21	4.99	1.68	6.89	5.98	2.07	8.17	6.98	2.55	9.14	7.48	2.62	10.11	7.34	2.70	10.85	7.24	2.71
43.0	5.00	4.89	1.76	6.67	5.88	2.15	7.95	6.88	2.64	8.92	7.38	2.72	9.89	7.24	2.79	10.63	7.14	2.81
46.0	4.78	4.73	1.83	6.46	5.78	2.23	7.73	6.78	2.73	8.81	7.37	2.81	9.79	7.22	2.88	10.54	7.13	2.90
48.0	4.63	4.59	1.89	6.31	5.72	2.28	7.59	6.71	3.10	8.74	7.37	3.19	9.73	7.22	3.27	10.48	7.12	3.29

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	6.44	2.14	6.39	2.32	6.33	2.50	6.28	2.72	6.23	2.93
-15.0	7.93	2.50	7.88	2.69	7.82	2.87	7.77	3.07	7.72	3.27
-10.0	9.42	2.87	9.37	3.06	9.31	3.24	9.26	3.43	9.21	3.61
-5.0	10.91	3.24	10.86	3.43	10.80	3.61	10.37	3.44	9.94	3.27
0.0	11.96	3.61	11.38	3.43	10.80	3.24	10.37	3.09	9.94	2.93
6.0	11.96	3.08	11.38	2.94	10.80	2.80	10.37	2.66	9.94	2.52
10.0	11.96	2.87	11.38	2.69	10.80	2.50	10.37	2.38	9.94	2.25
15.0	11.96	2.50	11.38	2.32	10.80	2.14	10.37	2.02	9.94	1.91
18.0	11.96	2.28	11.38	2.10	10.80	1.91	10.37	1.81	9.94	1.70

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW36GMLA0 [UT36R NM0]		ZBNW36GM2A0 [UM36R N20]		ZVNW36GM2A0 [UV36R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.37	1.50	1.37	1.50	1.37	1.42
Rated	1.00	1.00	1.00	0.98	1.00	0.93

◆ Heating

Indoor Unit	ZTNW36GMLA0 [UT36R NM0]		ZBNW36GM2A0 [UM36R N20]		ZVNW36GM2A0 [UV36R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.27	1.36	1.27	1.40	1.27	1.32
Rated	1.00	1.00	1.00	1.02	1.00	0.98

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.6 ZUUW42GA0 [UU42WR U30] / ZUUW42LA0 [UU43WR U30]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	8.42	6.77	1.67	10.54	7.97	2.20	12.15	9.16	2.74	13.37	9.76	2.85	14.60	9.59	2.95	15.53	9.47	2.97
25.0	7.96	6.57	1.83	10.08	7.77	2.39	11.69	8.96	2.96	12.92	9.56	3.06	14.14	9.39	3.17	15.07	9.27	3.19
32.0	7.32	6.29	2.08	9.44	7.49	2.64	11.05	8.68	3.26	12.27	9.28	3.37	13.50	9.10	3.47	14.43	8.99	3.50
35.0	7.04	6.17	2.19	9.16	7.36	2.75	10.77	8.56	3.39	12.00	9.16	3.50	13.23	8.98	3.61	14.16	8.87	3.63
40.0	6.59	5.97	2.38	8.71	7.16	2.94	10.32	8.36	3.61	11.54	8.96	3.72	12.77	8.78	3.82	13.70	8.67	3.84
43.0	6.31	5.85	2.49	8.43	7.04	3.05	10.04	8.24	3.74	11.27	8.84	3.85	12.49	8.66	3.95	13.42	8.55	3.98
46.0	6.04	5.73	2.60	8.16	6.92	3.16	9.77	8.12	3.87	11.13	8.82	3.98	12.37	8.65	4.09	13.32	8.53	4.11
48.0	5.85	5.65	2.67	7.97	6.84	3.23	9.59	8.04	4.40	11.04	8.82	4.52	12.29	8.64	4.63	13.24	8.53	4.66

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	8.05	2.86	7.98	3.11	7.91	3.35	7.85	3.64	7.79	3.92
-15.0	9.91	3.35	9.84	3.60	9.77	3.85	9.71	4.11	9.65	4.38
-10.0	11.78	3.85	11.71	4.10	11.64	4.34	11.57	4.59	11.51	4.84
-5.0	13.64	4.34	13.57	4.59	13.50	4.84	12.96	4.61	12.42	4.38
0.0	14.95	4.84	14.22	4.59	13.50	4.34	12.96	4.13	12.42	3.92
6.0	14.95	4.13	14.22	3.94	13.50	3.75	12.96	3.56	12.42	3.38
10.0	14.95	3.85	14.22	3.60	13.50	3.35	12.96	3.18	12.42	3.01
15.0	14.95	3.35	14.22	3.11	13.50	2.86	12.96	2.71	12.42	2.55
18.0	14.95	3.06	14.22	2.81	13.50	2.56	12.96	2.42	12.42	2.28

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW42GMLA0 [UT42R NM0]		ZBNW42GM2A0 [UM42R N20]		ZVNW42GM2A0 [UV42R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.21	1.34	1.21	1.34	1.21	1.38
Rated	1.00	1.00	1.00	0.99	1.00	1.04

◆ Heating

Indoor Unit	ZTNW42GMLA0 [UT42R NM0]		ZBNW42GM2A0 [UM42R N20]		ZVNW42GM2A0 [UV42R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.22	1.29	1.22	1.26	1.22	1.42
Rated	1.00	1.00	1.00	0.97	1.00	1.07

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.7 ZUUW48GA0 [UU48WR U30] / ZUUW48LA0 [UU49WR U30]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	9.40	7.25	2.07	11.77	8.52	2.74	13.56	9.80	3.41	14.93	10.44	3.54	16.30	10.26	3.67	17.34	10.13	3.69
25.0	8.89	7.03	2.27	11.25	8.31	2.97	13.05	9.59	3.68	14.42	10.22	3.81	15.79	10.04	3.94	16.83	9.92	3.96
32.0	8.17	6.73	2.59	10.54	8.01	3.29	12.34	9.29	4.06	13.71	9.92	4.19	15.07	9.74	4.32	16.12	9.62	4.34
35.0	7.87	6.60	2.73	10.23	7.88	3.42	12.03	9.16	4.22	13.40	9.80	4.35	14.77	9.61	4.48	15.81	9.49	4.51
40.0	7.36	6.39	2.95	9.72	7.66	3.65	11.52	8.94	4.49	12.89	9.58	4.62	13.91	9.17	4.75	14.92	9.05	4.78
43.0	7.05	6.26	3.09	9.42	7.54	3.79	11.21	8.81	4.81	12.28	9.22	4.94	13.39	8.90	5.08	14.39	8.78	5.11
46.0	6.74	6.13	3.23	9.11	7.41	3.92	10.91	8.68	5.13	11.66	8.86	5.27	12.88	8.62	5.41	13.86	8.51	5.43
48.0	6.54	6.04	3.32	8.90	7.32	4.02	10.70	8.60	5.34	11.26	8.61	5.48	12.53	8.44	5.62	13.50	8.33	5.65

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	8.56	3.83	8.49	4.11	8.41	4.38	8.34	4.68	8.27	4.97
-15.0	10.93	4.38	10.85	4.66	10.77	4.93	10.70	5.21	10.63	5.50
-10.0	13.29	4.93	13.21	5.20	13.14	5.48	13.07	5.75	13.00	6.03
-5.0	15.66	5.48	15.58	5.75	15.50	6.03	14.88	5.76	14.26	5.50
0.0	17.16	6.03	16.33	5.75	15.50	5.48	14.88	5.22	14.26	4.97
6.0	17.16	5.30	16.33	5.06	15.50	4.82	14.88	4.58	14.26	4.34
10.0	17.16	4.93	16.33	4.66	15.50	4.38	14.88	4.15	14.26	3.92
15.0	17.16	4.38	16.33	4.11	15.50	3.83	14.88	3.61	14.26	3.39
18.0	17.16	4.05	16.33	3.78	15.50	3.51	14.88	3.29	14.26	3.07

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW48GMLA0 [UT48R NM0]		ZBNW48GM3A0 [UM48R N30]		ZVNW48GM2A0 [UV48R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.19	1.31	1.19	1.19	1.19	1.23
Rated	1.00	1.00	1.00	0.92	1.00	0.95

◆ Heating

Indoor Unit	ZTNW48GMLA0 [UT48R NM0]		ZBNW48GM3A0 [UM48R N30]		ZVNW48GM2A0 [UV48R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.16	1.21	1.16	1.10	1.16	1.24
Rated	1.00	1.00	1.00	0.91	1.00	1.02

Note

Except for standard temperature condition, the capacity is not guaranteed.

6. Capacity Tables

6.8 ZUUW60GA0 [UU60WR U30] / ZUUW60LA0 [UU61WR U30]

■ Cooling Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	10.24	7.61	2.56	12.82	8.96	3.39	14.78	10.30	4.21	16.27	10.97	4.37	17.76	10.78	4.54	18.89	10.65	4.57
25.0	9.68	7.39	2.81	12.26	8.73	3.67	14.22	10.07	4.55	15.71	10.74	4.71	17.20	10.55	4.87	18.34	10.42	4.90
32.0	8.90	7.07	3.20	11.48	8.41	4.06	13.44	9.76	5.02	14.93	10.43	5.18	16.42	10.24	5.34	17.56	10.11	5.37
35.0	8.57	6.94	3.37	11.15	8.28	4.23	13.11	9.62	5.22	14.60	10.29	5.38	16.09	10.10	5.54	17.22	9.97	5.57
40.0	8.01	6.71	3.65	10.59	8.05	4.52	12.55	9.40	5.55	14.04	10.07	5.72	15.15	9.63	5.88	16.26	9.51	5.91
43.0	7.68	6.58	3.82	10.26	7.92	4.69	12.22	9.26	5.95	13.38	9.69	6.11	14.59	9.35	6.28	15.68	9.22	6.31
46.0	7.35	6.44	3.99	9.92	7.78	4.85	11.88	9.13	6.34	12.71	9.31	6.51	14.03	9.06	6.69	15.10	8.94	6.72
48.0	7.12	6.35	4.11	9.70	7.69	4.97	11.66	9.04	6.60	12.26	9.05	6.78	13.65	8.87	6.95	14.71	8.75	6.99

■ Heating Capacity

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-20.0	9.34	4.45	9.25	4.77	9.17	5.09	9.09	5.43	9.02	5.78
-15.0	11.91	5.09	11.83	5.41	11.75	5.73	11.67	6.06	11.59	6.39
-10.0	14.49	5.73	14.41	6.05	14.32	6.36	14.25	6.68	14.17	7.00
-5.0	17.07	6.36	16.98	6.68	16.90	7.00	16.22	6.69	15.55	6.39
0.0	18.71	7.00	17.80	6.68	16.90	6.36	16.22	6.07	15.55	5.78
6.0	18.71	6.16	17.80	5.88	16.90	5.60	16.22	5.32	15.55	5.04
10.0	18.71	5.73	17.80	5.41	16.90	5.09	16.22	4.82	15.55	4.55
15.0	18.71	5.09	17.80	4.77	16.90	4.45	16.22	4.20	15.55	3.94
18.0	18.71	4.71	17.80	4.39	16.90	4.07	16.22	3.82	15.55	3.57

Note

1. DB : Dry bulb temperature(℃), WB : Wet bulb temperature(℃)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

■ Correction factor due to the indoor unit combination

◆ Cooling

Indoor Unit	ZTNW60GMLA0 [UT60R NM0]		ZBNW60GM3A0 [UM60R N30]		ZVNW60GM2A0 [UV60R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.12	1.21	1.12	1.01	1.08	1.04
Rated	1.00	1.00	1.03	0.88	0.99	0.91

◆ Heating

Indoor Unit	ZTNW60GMLA0 [UT60R NM0]		ZBNW60GM3A0 [UM60R N30]		ZVNW60GM2A0 [UV60R N20]	
	TC	PI	TC	PI	TC	PI
Max.	1.11	1.19	1.11	1.04	1.11	1.19
Rated	1.00	1.00	0.99	0.86	0.99	0.99

Note

Except for standard temperature condition, the capacity is not guaranteed.

7. Capacity Coefficient Factor

7.1 Rate of change in capacity due to the main piping length

■ 1 Phase Inverter

◆ Rate of change in cooling capacity

Piping length(m)		5	10	15	20	30	40	50	60	70	75	80	85
Rate of change in capacity(%)	2.5/3.5 kW	100	99.8	99.3	98.8	-	-	-	-	-	-	-	-
	5.0 kW	100	99.8	99.3	98.8	97.8	-	-	-	-	-	-	-
	6.8 kW	100	99.3	97.9	96.6	93.8	91.1	88.4	-	-	-	-	-
	9.5/12.0/13.4/14.6 kW	100	99.3	97.9	96.6	93.8	91.1	88.4	85.6	82.9	81.5	80.1	78.7

◆ Rate of change in heating capacity

Piping length(m)		5	10	15	20	30	40	50	60	70	75	80	85
Rate of change in capacity(%)	2.5/3.5 kW	100	99.8	99.4	99.0	-	-	-	-	-	-	-	-
	5.0 kW	100	99.8	99.4	99.0	98.3	-	-	-	-	-	-	-
	6.8 kW	100	99.7	99.2	98.7	97.7	96.6	95.6	-	-	-	-	-
	9.5/12.0/13.4/14.6 kW	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93	92.5	92

■ 3 Phase Inverter

◆ Rate of change in cooling capacity

Piping length(m)		5	10	15	20	30	40	50	60	70	75	80	85
Rate of change in capacity(%)	9.5/12.0/13.4/14.6 kW	100	99.3	97.9	96.6	93.8	91.1	88.4	85.6	82.9	81.5	80.1	78.7

◆ Rate of change in heating capacity

Piping length(m)		5	10	15	20	30	40	50	60	70	75	80	85
Rate of change in capacity(%)	9.5/12.0/13.4/14.6 kW	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.5	93.0	92.5	92.0

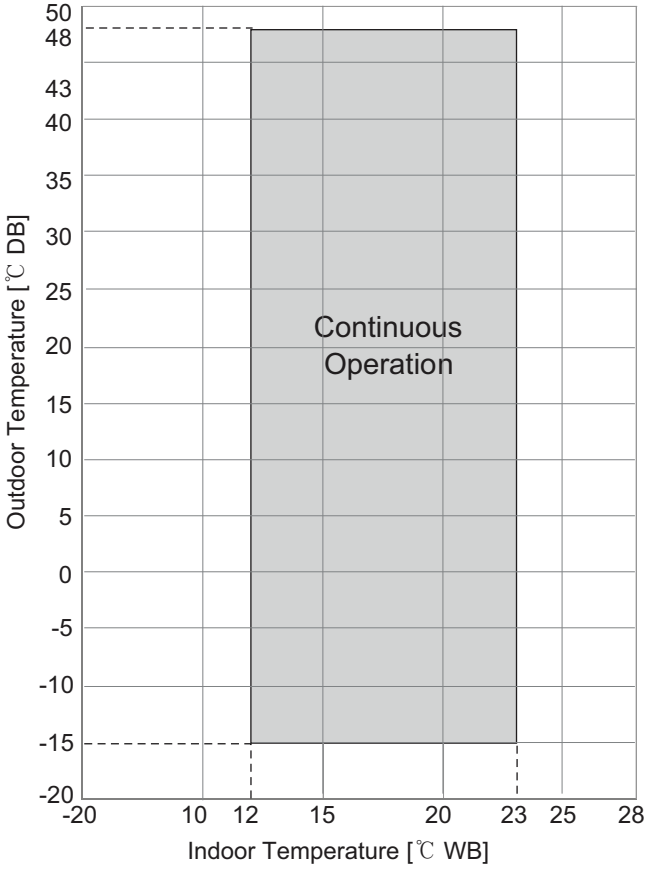
7.2 Calculation of actual system capacity

1. **Outdoor unit standard maximum capacity**
   $Q_{max.}$ [from specification table]
2. **Outdoor unit capacity at Ti, To temperature.**
   $Q_{(Ti, To)}$ [from capacity table]
3. **Outdoor unit capacity coefficient factor**
   $F_{(Ti, To)} = Q_{(Ti, To)} / Q_{(max.)}$
4. **Piping correction factor**
   F_{piping} for piping length [from capacity coefficient factor table]
5. **Indoor Unit actual capacity**
   $Q_{actual} = Q_{max} \times F_{(Ti, To)} \times F_{piping}$

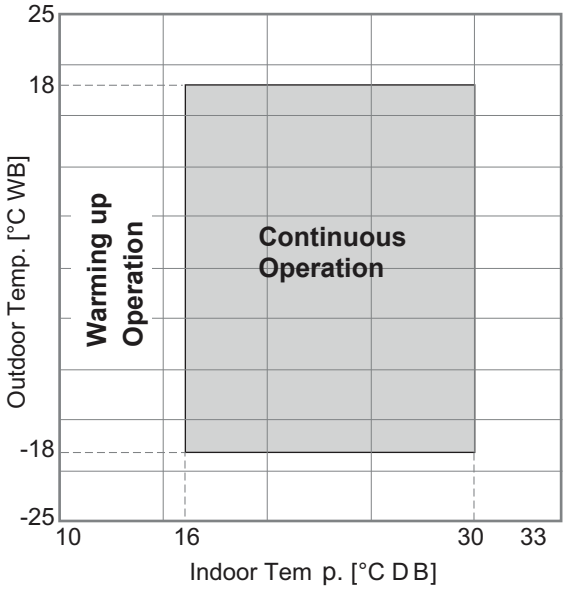
8. Operation Range

◆ **ZUUW09GA0 [UU09WR UL0], ZUUW12GA0 [UU12WR UL0], ZUUW18GA0 [UU18WR U20], ZUUW24GA0 [UU24WR U40]**

Cooling



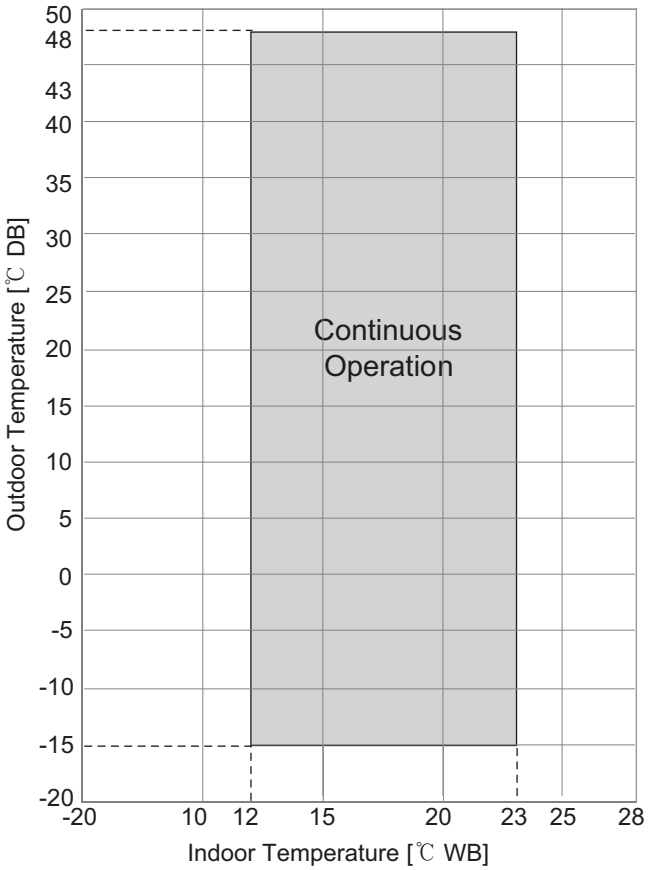
Heating



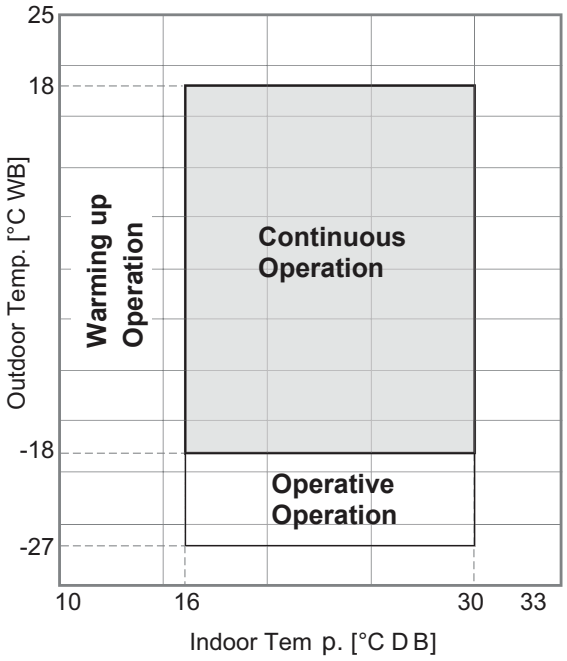
8. Operation Range

◆ **ZUUW36GA0 [UU36WR U30], ZUUW36LA0 [UU37WR U30], ZUUW42GA0 [UU42WR U30], ZUUW42LA0 [UU43WR U30], ZUUW48GA0 [UU48WR U30], ZUUW48LA0 [UU49WR U30], ZUUW60GA0 [UU60WR U30], ZUUW60LA0 [UU61WR U30]**

Cooling



Heating



9. Electric Characteristics

■ Wiring of Main Power Supply and Equipment Capacity

1. The power supply work is needed only to the outdoor unit. The power supply to the indoor unit is conducted through the transmission wiring. Therefore, the power supply work can be carried out at just one place of the outdoor unit. It will contribute to simplify the work procedure and to save cost.
2. Bear in mind ambient conditions (ambient temperature,direct sunlight, rain liquid,etc.) when proceeding with the wiring and connections
3. The wire size is the minimum value for metal conduit wiring. The power cord size should be 1 rank thicker taking into account the line voltage drops. Make sure the power-supply voltage does not drop more than 10%.
4. Specific wiring requirements should adhere to the wiring regulations of the region.
5. Power supply cords of parts of appliances for outdoor use should not be lighter than polychloroprene sheathed flexible cord.
6. Don't install an individual switch or electrical outlet to disconnect each of indoor unit separately from the power supply.

⚠ WARNING

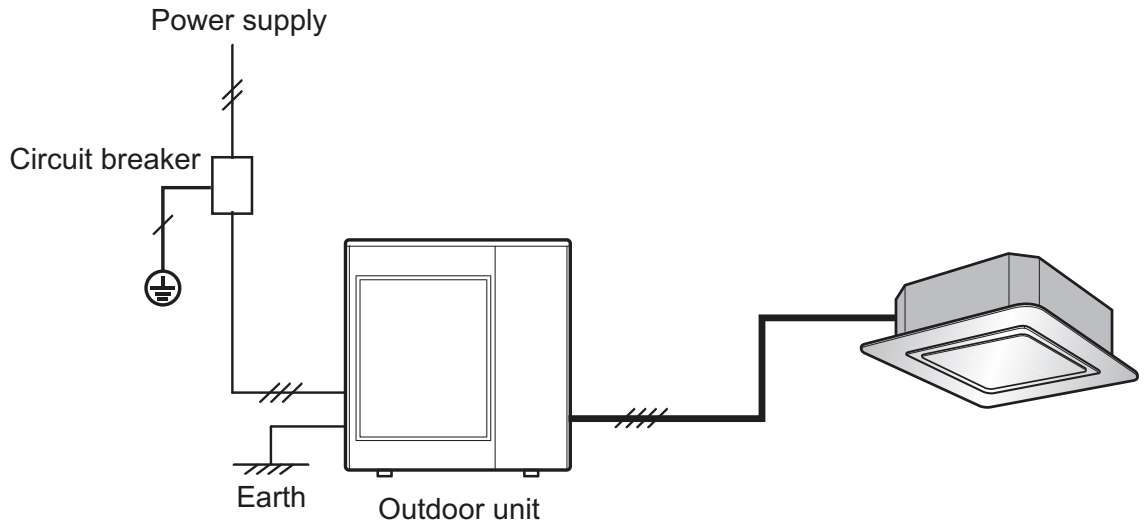
- **Follow ordinance of your governmental organization for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.**
- **Make sure to use specified wires for connections so that no external force is imparted to terminal connections. If connections are not fixed firmly, it may cause heating or fire.**
- **Make sure to use the appropriate type of overcurrent protection switch. Note that generated overcurrent may include some amount of direct current.**

⚠ CAUTION

- **Some installation site may require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.**
- **Do not use anything other than breaker and fuse with correct capacity. Using fuse and wire or copper wire with too large capacity may cause a malfunction of unit or fire.**

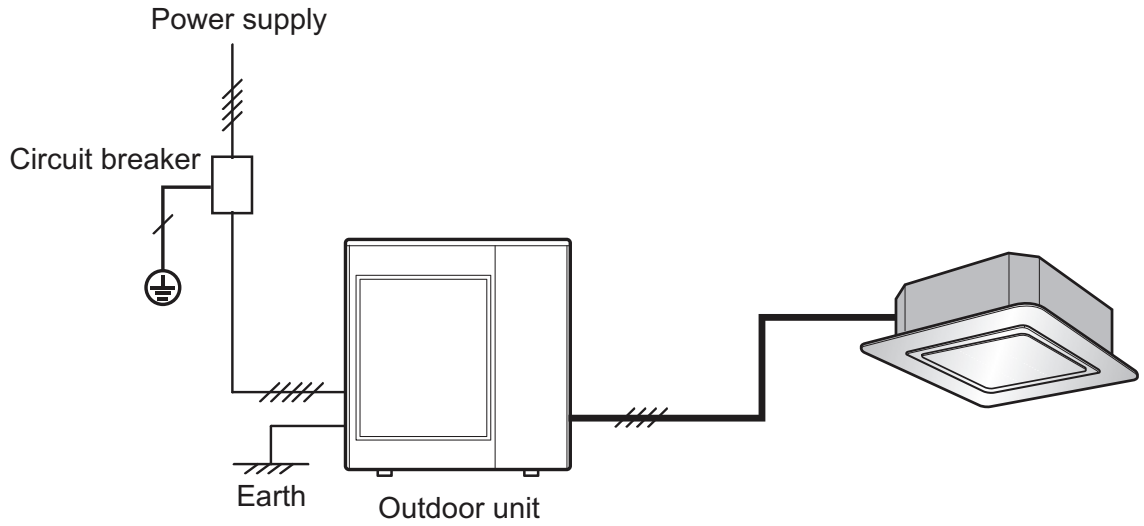
9. Electric Characteristics

[Field Wiring (Single Phase, 2 Wiring Type)]



※ This figure is representative example for field wiring. Actual appearance of outdoor and indoor units could be different with installed product.

[Field Wiring (3 Phase, 4 Wiring Type)]



※ This figure is representative example for field wiring. Actual appearance of outdoor and indoor units could be different with installed product.

9. Electric Characteristics

Outdoor Unit	Combined Indoor Unit		Unit		Power		Comp		OFM		IFM	
Model names	Model Name	No. of Unit	Phase Hz Volts	Voltage range	MCA	MFA	MSC	RLA	kW	FLA	kW	FLA
ZUUW09GA0 [UU09WR UL0]	ZTNW09GRLA0 [CT09R NR0]	1	1 50 220-240	Min. : 198 Max. : 264	11.9	15	-	9.0	0.085	0.25	0.04	0.4
	ZBNW09GL2A0 [CL09LR N20]				11.9	15	-	9.0	0.085	0.25	0.04	0.4
ZUUW12GA0 [UU12WR UL0]	ZTNW12GRLA0 [CT12R NR0]				11.9	15	-	9.0	0.085	0.25	0.04	0.4
	ZBNW12GL2A0 [CL12R N20]				11.9	15	-	9.0	0.085	0.25	0.04	0.4
ZUUW18GA0 [UU18WR U20]	ZTNW18GQLA0 [CT18R NQ0]				15.8	20	-	12.0	0.085	0.40	0.04	0.4
	ZBNW18GM1A0 [CM18R N10]				15.8	20	-	12.0	0.085	0.40	0.08	0.4
	ZBNW18GL2A2 [CL18R N20]				16.2	20	-	12.0	0.085	0.40	0.12	0.8
	ZVNW18GM1A0 [UV18R N10]				15.8	20	-	12.0	0.085	0.40	0.05	0.4
ZUUW24GA0 [UU24WR U40]	ZTNW24GPLA0 [CT24R NP0]				21.1	25	-	16.0	0.124	0.48	0.06	0.6
	ZBNW24GM1A0 [CM24 N10]				21.0	25	-	16.0	0.124	0.48	0.09	0.5
	ZBNW24GL3A0 [CL24R N30]				21.5	25	-	16.0	0.124	0.48	0.15	1.0
	UVNH24GJLA2 [UV24R N10]				21.1	25	-	16.0	0.124	0.48	0.06	0.6
ZUUW36GA0 [UU36WR U30]	ZTNW36GMLA0 [UT36R NM0]				34.2	40	-	25.6	0.248	1.60	0.136	0.6
	ZBNW36GM2A0 [UM36R N20]				36.1	40	-	25.6	0.248	1.60	0.400	2.5
	ZVNW36GM2A0 [UV36R N20]				34.0	40	-	25.6	0.248	1.60	0.125	0.5
ZUUW42GA0 [UU42WR U30]	ZTNW42GMLA0 [UT42R NM0]				34.2	40	-	25.6	0.248	1.60	0.136	0.6
	ZBNW42GM2A0 [UM42R N20]				36.1	40	-	25.6	0.248	1.60	0.400	2.5
	ZVNW42GM2A0 [UV42R N20]				34.0	40	-	25.6	0.248	1.60	0.125	0.5
ZUUW48GA0 [UUW48 U32]	ZTNW48GMLA0 [UT48R NM0]				34.2	40	-	25.6	0.248	1.60	0.136	0.6
	ZBNW48GM3A0 [UM48R N30]				36.1	40	-	25.6	0.248	1.60	0.350	2.5
	ZVNW48GM2A0 [UV48R N20]				34.0	40	-	25.6	0.248	1.60	0.125	0.5
ZUUW60GA0 [UU60WR U30]	ZTNW60GMLA0 [UT60R NM0]				34.2	40	-	25.6	0.248	1.60	0.136	0.6
	ZBNW60GM3A0 [UM60R N30]				36.1	40	-	25.6	0.248	1.60	0.350	2.5
	ZVNW60GM2A0 [UV60R N20]				34.0	40	-	25.6	0.248	1.60	0.125	0.5

Note

1. Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phase is 2%.
3. MSC means the Max. current during the starting of compressor.
4. MSC and RLA are measured as the compressor only test condition.
5. OFM and IFM are measured as the outdoor unit test condition.
6. Select the wire size based on the MCA.
7. MFA is used to select the circuit breaker and ground fault circuit interrupter, and recommended circuit breaker type is ELCB(Earth Leakage Circuit Breaker).

:

MCA : Minimum Circuit Amperes (A)
MFA : Maximum Fuse Amperes (A)
MSC : Maximum Starting Current
RLA : Rated Load Amperes (A)
OFM : Outdoor Fan Motor
IFM : Indoor Fan Motor
kW : Fan Motor rated output (kW)
FLA : Full Load Amperes (A)

9. Electric Characteristics

Outdoor Unit	Combined Indoor Unit		Unit		Power		Comp		OFM		IFM	
Model names	**Model Name**	**No. of Unit**	**Phase Hz Volts**	**Voltage range**	**MCA**	**MFA**	**MSC**	**RLA**	**kW**	**FLA**	**kW**	**FLA**
ZUUW36LA0 [UU37WR U30]	ZTNW36GMLA0 [UT36R NM0]	1	3 50 318-415	Min. : 342 Max. : 456	14.7	20	-	10.0	0.248	1.60	0.136	0.6
	ZBNW36GM2A0 [UM36R N20]				16.6	20	-	10.0	0.248	1.60	0.400	2.5
	ZVNW36GM2A0 [UV36R N20]				14.6	20	-	10.0	0.248	1.60	0.125	0.5
ZUUW42LA0 [UU43WR U30]	ZTNW42GMLA0 [UT42R NM0]				14.7	20	-	10.0	0.248	1.60	0.136	0.6
	ZBNW42GM2A0 [UM42R N20]				16.6	20	-	10.0	0.248	1.60	0.400	2.5
	ZVNW42GM2A0 [UV42R N20]				14.6	20	-	10.0	0.248	1.60	0.125	0.5
ZUUW48LA0 [UU49WR U30]	ZTNW48GMLA0 [UT48R NM0]				14.7	20	-	10.0	0.248	1.60	0.136	0.6
	ZBNW48GM3A0 [UM48R N30]				16.6	20	-	10.0	0.248	1.60	0.350	2.5
	ZVNW48GM2A0 [UV48R N20]				14.6	20	-	10.0	0.248	1.60	0.125	0.5
ZUUW60LA0 [UU61WR U30]	ZTNW60GMLA0 [UT60R NM0]				14.7	20	-	10.0	0.248	1.60	0.136	0.6
	ZBNW60GM3A0 [UM60R N30]				16.6	20	-	10.0	0.248	1.60	0.350	2.5
	ZVNW60GM2A0 [UV60R N20]				14.6	20	-	10.0	0.248	1.60	0.125	0.5

Note

1. Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phase is 2%.
3. MSC means the Max. current during the starting of compressor.
4. MSC and RLA are measured as the compressor only test condition.
5. OFM and IFM are measured as the outdoor unit test condition.
6. Select the wire size based on the MCA.
7. MFA is used to select the circuit breaker and ground fault circuit interrupter, and recommended circuit breaker type is ELCB(Earth Leakage Circuit Breaker).

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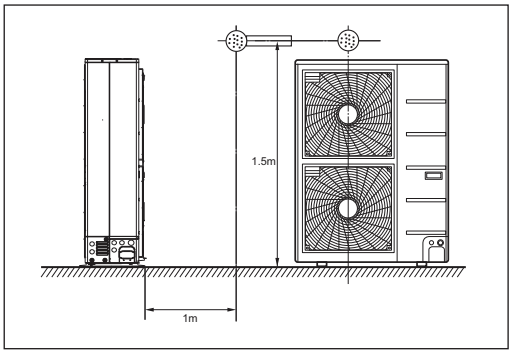
OFM : Outdoor Fan Motor
IFM : Indoor Fan Motor
kW : Fan Motor rated output (kW)
FLA : Full Load Amperes (A)

10. Sound Levels

10.1 Sound Pressure Levels

■ Overall

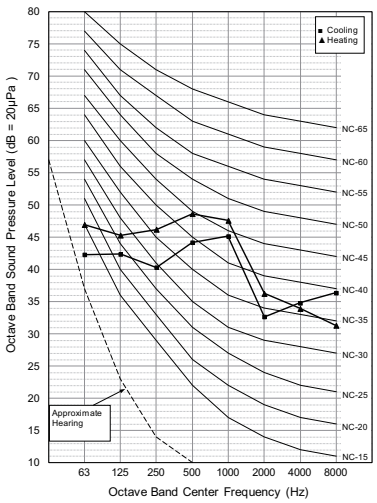


Note

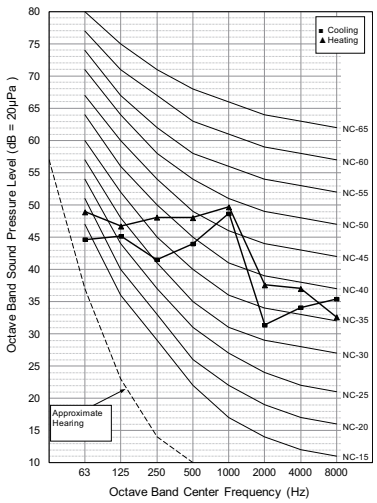
1. Data is valid at free field condition.
2. Reference accoustic pressure 0dB = 20μPa.
3. Data is valid at nominal operation condition. Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
4. Sound levels can be increased in accordance with installation and operating conditions. (Operating conditions include some functional condition like Static pressure mode, air guide use, Room target temperature setting, etc and these functions are different in accordance with each model.)
5. Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment in installed.

Model	Sound Pressure Levels [dB(A)]	
	Cooling	Heating
ZUUW09GA0 [UU09WR UL0]	47	50
ZUUW12GA0 [UU12WR UL0]	49	52
ZUUW18GA0 [UU18WR U20]	47	52
ZUUW24GA0 [UU24WR U40]	48	52
ZUUW36GA0 [UU36WR U30]	53	54
ZUUW42GA0 [UU42WR U30]	52	54
ZUUW48GA0 [UU48WR U30]	52	54
ZUUW60GA0 [UU60WR U30]	52	54
ZUUW36LA0 [UU37WR U30]	52	54
ZUUW42LA0 [UU43WR U30]	52	54
ZUUW48LA0 [UU49WR U30]	52	54
ZUUW60LA0 [UU61WR U30]	52	54

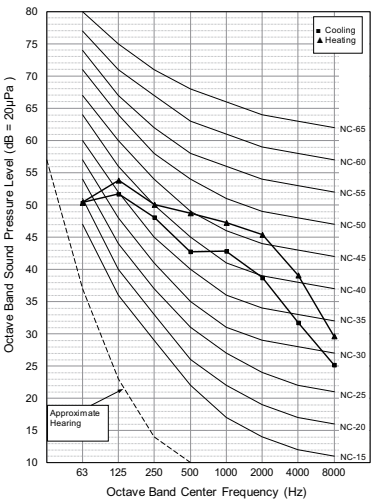
ZUUW09GA0 [UU09WR UL0]



ZUUW12GA0 [UU12WR UL0]

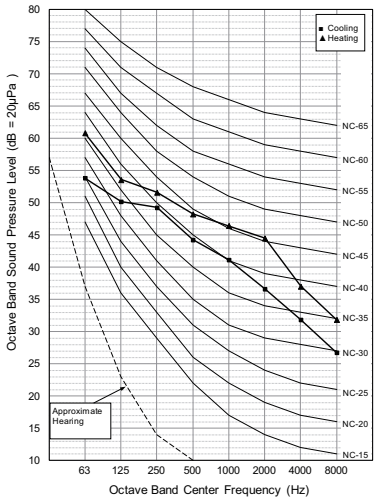


ZUUW18GA0 [UU18WR U20]

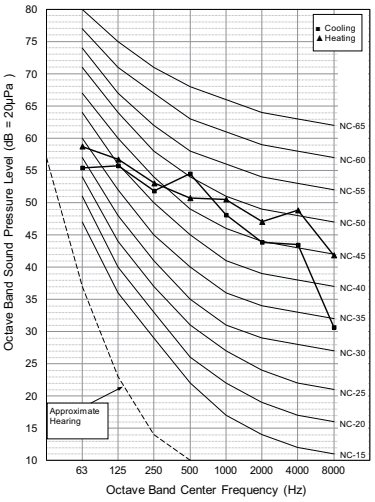


10. Sound Levels

ZUUW24GA0 [UU24WR U40]



ZUUW36GA0 [UU36WR U30] ZUUW36LA0 [UU37WR U30]
ZUUW42GA0 [UU42WR U30] ZUUW42LA0 [UU43WR U30]
ZUUW48GA0 [UU48WR U30] ZUUW48LA0 [UU49WR U30]
ZUUW60GA0 [UU60WR U30] ZUUW60LA0 [UU61WR U30]



10. Sound Levels

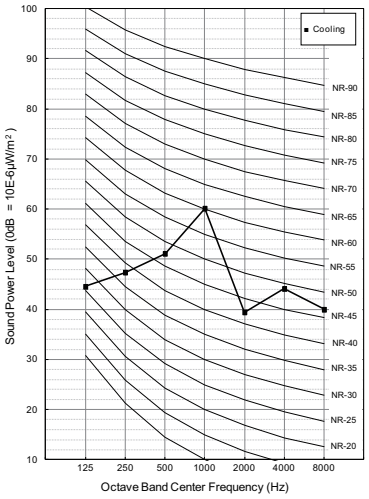
10.2 Sound Power Levels

Note

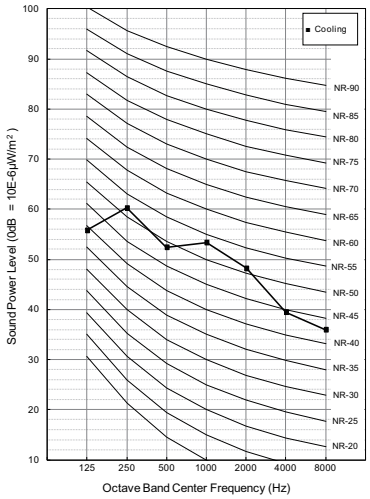
1. Data is valid at diffuse field condition.
2. Reference acoustic intensity 0dB = 10E-6μW/m^2
3. Sound power level is measured on the rated condition in the reverberation rooms. Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
4. Sound levels can be increased in accordance with installation and operating conditions. (Operating conditions include some functional condition like Static pressure mode, air guide use, Room target temperature setting, etc and these functions are different in accordance with each model.)
5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment in installed.

Model	Sound Power Level [dB(A)]
	Cooling
ZUUW09GA0 [UU09WR UL0]	65
ZUUW12GA0 [UU12WR UL0]	65
ZUUW18GA0 [UU18WR U20]	63
ZUUW24GA0 [UU24WR U40]	67
ZUUW36GA0 [UU36WR U30]	66
ZUUW42GA0 [UU42WR U30]	67
ZUUW48GA0 [UU48WR U30]	68
ZUUW60GA0 [UU60WR U30]	68
ZUUW36LA0 [UU37WR U30]	66
ZUUW42LA0 [UU43WR U30]	67
ZUUW48LA0 [UU49WR U30]	68
ZUUW60LA0 [UU61WR U30]	68

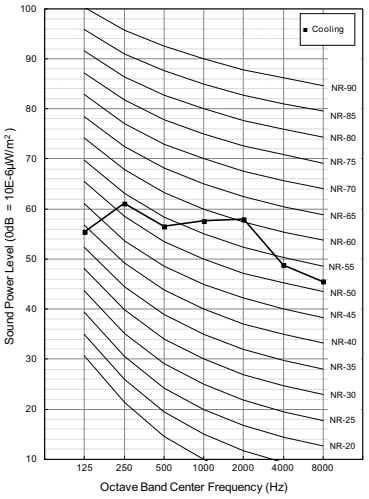
ZUUW09GA0 [UU09WR UL0]
ZUUW12GA0 [UU12WR UL0]



ZUUW18GA0 [UU18WR U20]

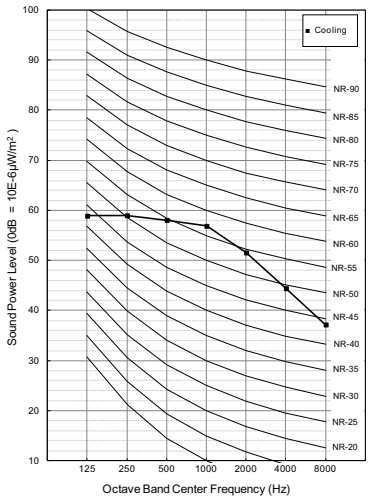


ZUUW24GA0 [UU24WR U40]

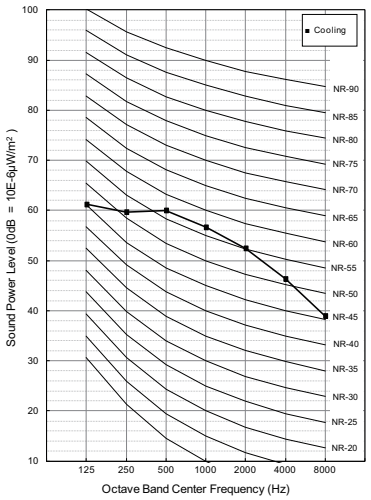


10. Sound Levels

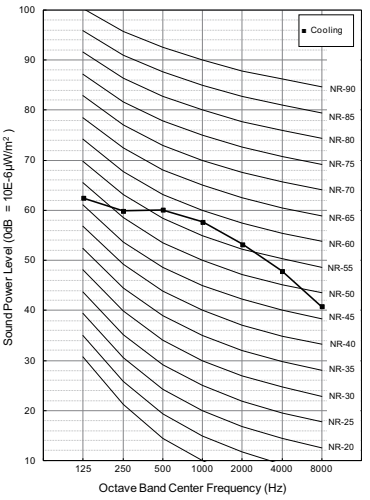
ZUUW36GA0 [UU36WR U30]
ZUUW36GA0 [UU37WR U30]



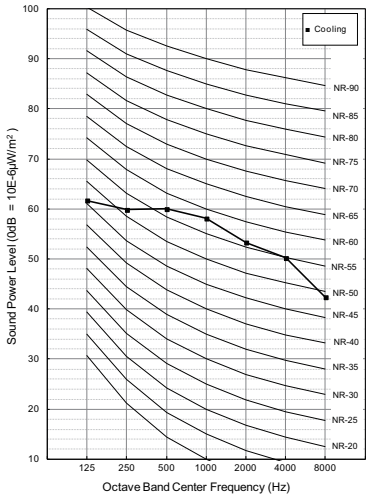
ZUUW42LA0 [UU42WR U30]
ZUUW42LA0 [UU43WR U30]



ZUUW48LA0 [UU48WR U30]
ZUUW48LA0 [UU49WR U30]



ZUUW60GA0 [UU60WR U30]
ZUUW60LA0 [UU61WR U30]



SINGLE

Installation of Outdoor Units

1. Alternative Refrigerant R32
2. Select the Best Location
3. Installation Space
4. Installation of Outdoor Unit
5. Refigerant piping system
6. Installation guide at the seaside
7. Seasonal wind and caution in winter

1. Alternative Refrigerant R32

The refrigerant R32 has the higher efficiency and more friendly for environment in comparison with R410A. It has a lower GWP (Global Warming Potential) value, and higher efficiency than R410A. The Ozone Depletion Potential (ODP) of R32 is 0, and Global Warming Potential(GWP) is 675.

Refrigerant piping consists of copper/steel pipes, joints, and other fittings. All components must be selected and installed in conformity with the standards pertaining to the Refrigeration Safety Regulation. Same piping as for R410A can be used.

⚠ WARNING

- This product contains fluorinated greenhouse gases (Refrigerant type : R32). Do NOT emit regrigerant gases into the atmosphere.
- The refrigerant R32 is Slightly Flammable gas. But it does not leak normally. If the refrigerant leaks in the room and contact with burning energy, it may cause fire, or a harmful gas.
- If there are some leak, turn off any combustible devices, ventilate the room, and contact the dealer from which you purchased the unit. Do not use the unit until the refrigerant leaked is repaired.
- Only use R32 as refrigerant. Other substances may cause explosions and accidents.

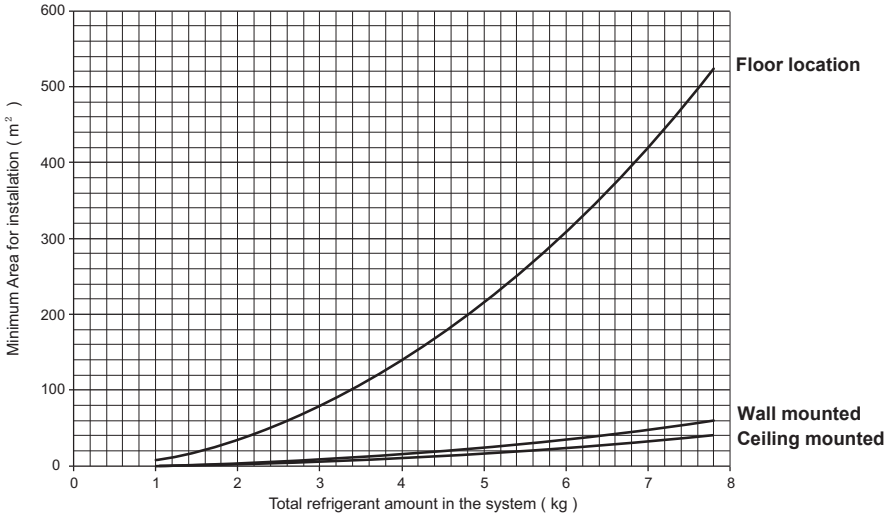
⚠ CAUTION

- The wall thickness of the piping should comply with the relevant local and national regulations for the designed pressure.
- For high-pressure refrigerant, any unapproved pipe must not be used.
- Do not heat pipes more than necessary to prevent them from softening.

1. Alternative Refrigerant R32

■ Minimum Floor Area for Installation

- The unit should be installed, operated and stored in a room with a floor area larger than the minimum area. Use the graph of table to determine the minimum area.
- Pipe-work shall be protected from physical damage and shall not be installed in an unventilated space, if that space is smaller than minimum area for installation.



– Total refrigerant amount in the system = factory refrigerant charge + additional refrigerant amount

Refrigerant Amount (kg)	Minimum Area (m²)		
	Floor location	Wall mounted	Ceiling Mounted
1.0	8.58	0.95	0.64
1.224	12.90	1.43	0.956
1.4	16.82	1.87	1.25
1.6	21.97	2.44	1.63
1.8	27.80	3.09	2.07
2.0	34.32	3.81	2.55
2.2	41.53	4.61	3.09
2.4	49.42	5.49	3.68
2.6	58.00	6.44	4.31
2.8	67.27	7.47	5.00
3.0	77.22	8.58	5.74
3.2	87.86	9.76	6.54
3.4	99.19	11.02	7.38
3.6	111.20	12.36	8.27
3.8	123.90	13.77	9.22
4.0	137.29	15.25	10.21
4.2	151.36	16.82	11.26
4.4	166.12	18.46	12.36
4.6	181.56	20.17	13.50
4.8	197.70	21.97	14.70
5.0	214.51	23.83	15.96
5.2	232.02	25.78	17.26
5.4	250.21	27.80	18.61
5.6	269.09	29.90	20.01
5.8	288.65	32.07	21.47
6.0	308.90	34.32	22.98
6.2	329.84	36.65	24.53
6.4	351.46	39.05	26.14
6.6	373.77	41.53	27.80
6.8	396.76	44.08	29.51
7.0	420.45	46.72	31.27
7.2	444.81	49.42	33.09
7.4	469.87	52.21	34.95
7.6	495.61	55.07	36.86
7.8	522.04	58.00	38.83

2. Select the Best Location

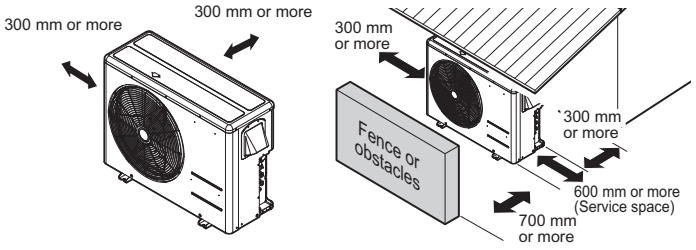
Select space for installing outdoor unit, which will meet the following conditions:

- No direct thermal radiation from other heat sources
- No possibility of annoying neighbors by noise from unit
- No exposition to strong wind
- With strength which bears weight of unit
- Note that drain flows out of unit when heating (Heat pump model)
- With space for air passage and service work shown next
- Because of the possibility of fire, do not install unit to the space where generation, inflow, stagnation, andleakage of combustible gas is expected.
- Avoid unit installation in a place where acidic solution and spray (sulfur) are often used.
- Do not use unit under any special environment where oil, steam and sulfuric gas exist.
- It is recommended to fence round the outdoor unit in order to prevent any person or animal from accessing theoutdoor unit.
- If installation site is area of heavy snowfall, then the following directions should be observed.
  - Make the foundation as high as possible.
  - Fit a snow protection hood.
- Select installation location considering following conditions to avoid bad condition when additionally performingdefrost operation. (Heat pump model)
  1. Install the outdoor unit at a place well ventilated and having a lot of sunshine in case of installing the product at a place with a high humidity in winter (near beach, coast, lake, etc).
     (Ex) Rooftop where sunshine always shines.
  2. Performance of heating will be reduced and pre-heat time of the indoor unit may be lengthened in case ofinstalling the outdoor unit in winter at following location:
     1) Shade position with a narrow space
     2) Location with much moisture in neighboring floor.
     3) Location with much humidity around.
     4) Location where liquid gathers since the floor is not even.

3. Installation Space

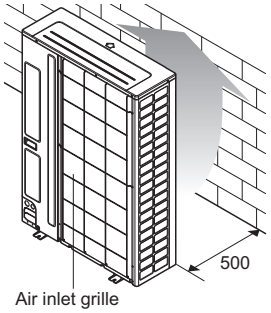
3.1 Clearance around outdoor units

- Ensure that the space around the back is or more more than 300 mm on the opposite to the PCB side and secure 600 mm space near the compressor and PCB side of the air conditioner for service.

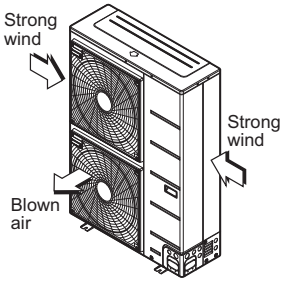


❈ Outdoor unit is representative. Actual appearance of outdoor unit may be different but clearances will stay the same.

- Install the unit so that its discharge port faces to the wall of the building. Keep a distance 500mm or more between the unit and the wall surface.
- Supposing the wind direction during the operation season of the air conditioner, install the unit so that the discharge port is set at right angle to the wind direction.



Turn the air outlet side toward the building's wall, fence or windbreak screen.



Set the outlet side at a right angle to the direction of the wind.

❈ Outdoor unit is representative. Actual appearance of outdoor unit may be different but clearances will stay the same.

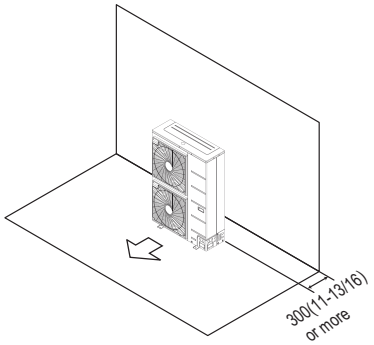
3. Installation Space

■ Where there is an obstacle on the air intake side:

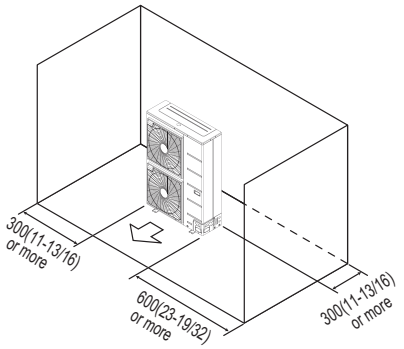
◆ No obstacle above

[Unit : mm(inch)]

• Obstacle on the suction side only



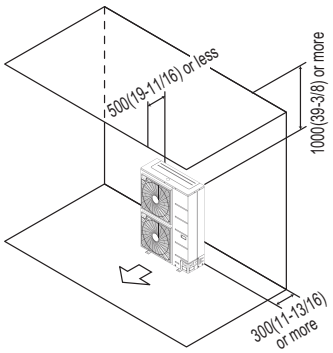
• Obstacle on the both sides



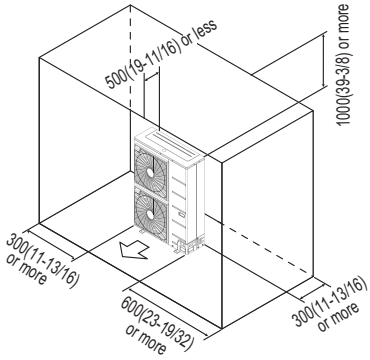
◆ Obstacle above, too

[Unit : mm(inch)]

• Obstacle on the air intake side, too



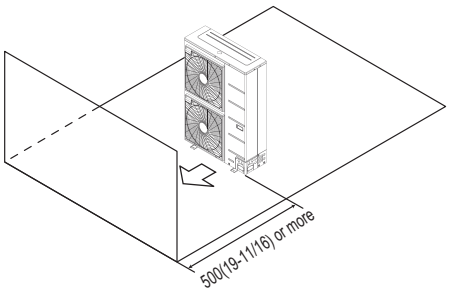
• Obstacle on the air intake side, and both sides



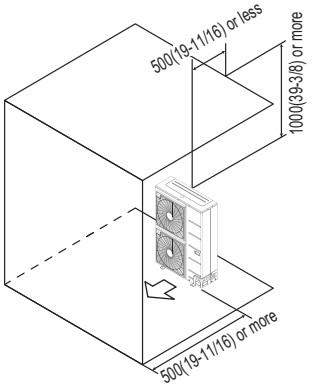
■ Where there is an obstacle on the discharge side:

[Unit : mm(inch)]

• No obstacle above



• Obstacle above, too



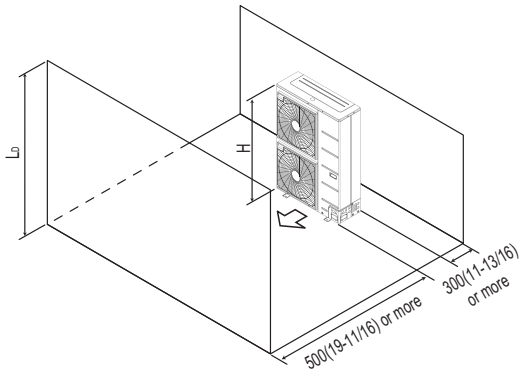
3. Installation Space

■ Where there are obstacles on both suction and discharge sides:

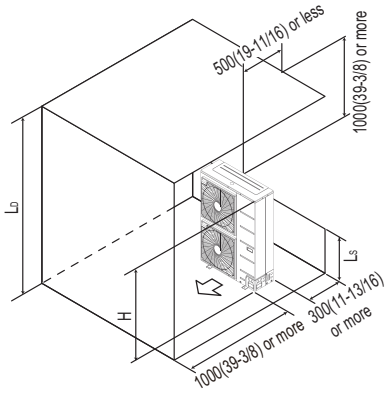
◆ Where the obstacles on the discharge side is higher than the unit:

[Unit : mm(inch)]

• No obstacle above



• Obstacle above, too



The relations between H, A and L are as follows:

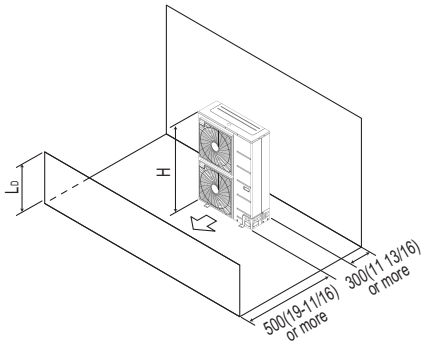
	L	A[mm(inch)]
L ≤ H	0 < L ≤ 1/2H	750(29 1/32)
	1/2H < L	1 000(39 3/8)
H < L	Set the stand as: L ≤ H	

Close the bottom of the installation frame to prevent the discharged air from being bypassed.

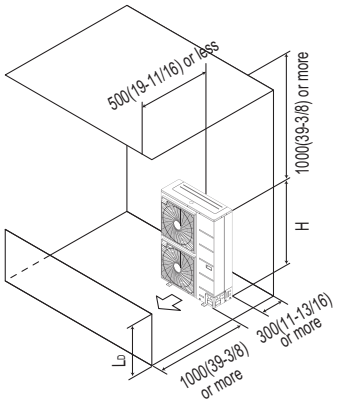
◆ Where the obstacles on the discharge side is lower than the unit:

[Unit : mm(inch)]

• No obstacle above



• Obstacle above, too
'L' should be lower than 'H'.
Close the bottom of the installation frame to prevent the discharged air from being bypassed.

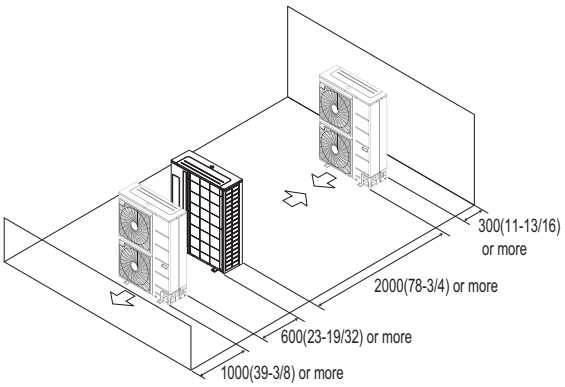


3. Installation Space

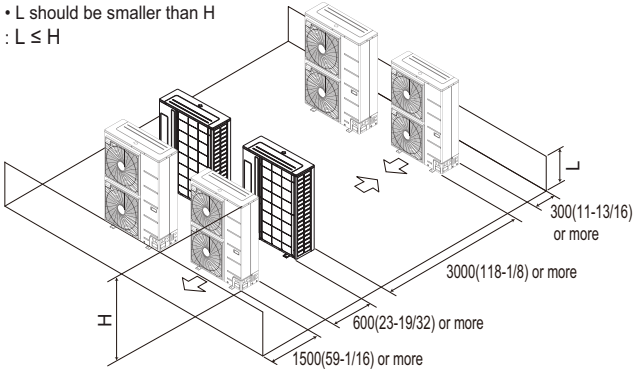
■ Series installation

[Unit : mm(inch)]

• One row of stand alone installation



• Rows of collective installation (2 or more)



3.2 Air guide work

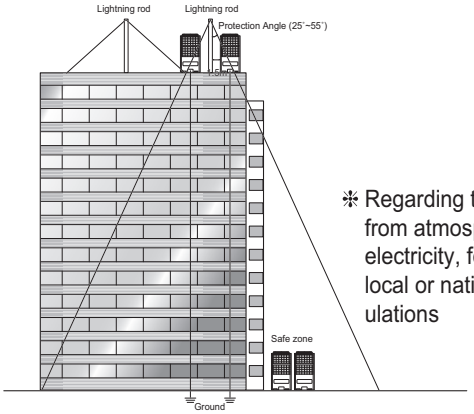
In case of out door unit is located outdoor cabin of apartment or flats, then the efficiency can drop and system pressure increases thus finally damaging the compressor or other components in the system by heat short circuit.

[Example]

<Without air guide>
Safety device activation

<With air guide>
Normal operation

3.3 Lightning safety zone



❊ Regarding the safety from atmosphere electricity, follow the local or national regulations

1. To protect outdoor unit from lightning, it should be placed within lightning safety zone.

◆ Safety zone

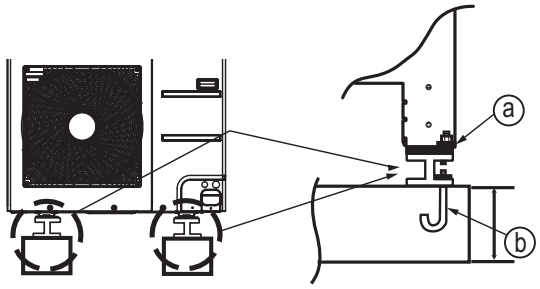
Building Height [m]	20	30	45	60
Protection Angle [°]	55	45	35	25

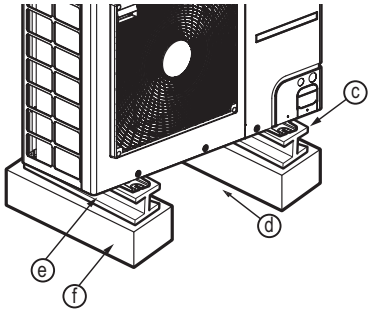
2. Power cable and communication cable should be 1.5m away from lightning rod.
3. High resistance grounded system should be performed against induced lightning or indirect stroke.
4. If the building has no lightning protection, outdoor may be damage from lightning. This should be informed to customer or building owner in advance.

4. Installation of Outdoor Unit

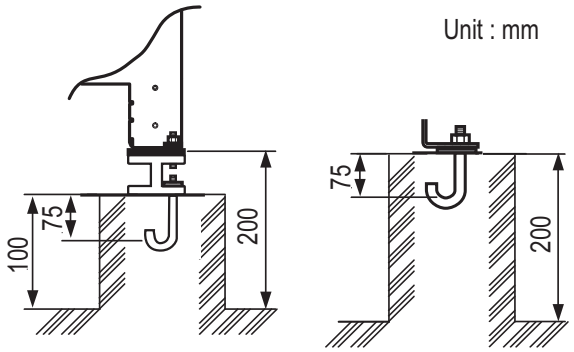
4.1 Foundation for Installation

- Fix the unit tightly with bolts as shown below so that unit will not fall down due to earthquake or gust.
- Use the H-beam support as a base support.
- Noise and vibration may occur from the floor or wall since vibration is transferred through the installation partdepending on installation status. Thus, use anti-vibration materials (cushion pad) fully (The base pad shall bemore than 200mm).





Unit : mm



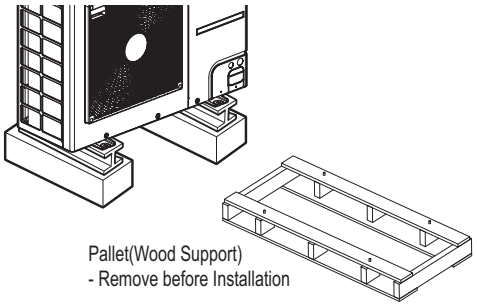
ⓐ The corner part must be fixed firmly. Otherwise, the support for the installation may be bent.
ⓑ Get and use M10 Anchor bolt.
ⓒ Put Cushion Pad between the outdoor unit and ground support for the vibration protection in wide area.
ⓓ Space for pipes and wiring (Pipes and wirings for bottom side)
ⓔ H-beam support
ⓕ Concrete support
❉ Outdoor unit is representative. Actual appearance of outdoor unit may be different but clearances will stay the same.

⚠ WARNING

- **Install where it can sufficiently support the weight of the outdoor unit.**
  If the support strength is not enough, the outdoor unit may drop and hurt people.
- **Install where the outdoor unit may not fall in strong wind or earthquake.**
  If there is a fault in the supporting conditions, the outdoor unit may fall and hurt people.
- **Please take extra cautions on the supporting strength of the ground, water outlet treatment(treatment of the water flowing out of the outdoor unit in operation) of heat pump unit, and the passages of the pipe and wiring, when making the ground support.**
- **Do not use tube or pipe for water outlet in the Base pan. Use drainage instead for water outlet.**
  The tube or pipe may freeze and the water may not be drained. (Heat pump model)

⚠ WARNING

- **Be sure to remove the Pallet(Wood Support) of the bottom side of the outdoor unit Base Pan before fixing the bolt. It may cause the unstable state of the outdoor settlement, and may cause freezing of the heat exchanger resulting in abnormal operations.**
- **Be sure to remove the Pallet(Wood Support) of the bottom side of the outdoor unit before welding. Not removing Pallet(Wood Support) causes hazard of fire during welding.**

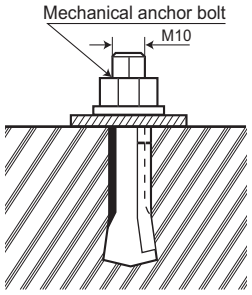


4. Installation of Outdoor Unit

4.2 Settlement of the outdoor unit

- Anchor the outdoor unit with a bolt and nut tightly and horizontally on a concrete or rigid mount.
- When installing on the wall, roof or rooftop, anchor the mounting base securely with a nail or wire assuming the influence of wind and earthquake.
- In the case when the vibration of the unit is conveyed to the house, secure the unit with an anti-vibration rubber.

◆ Bolt construction work



[Unit : mm]

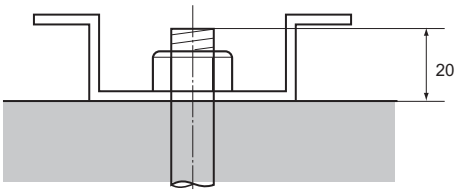
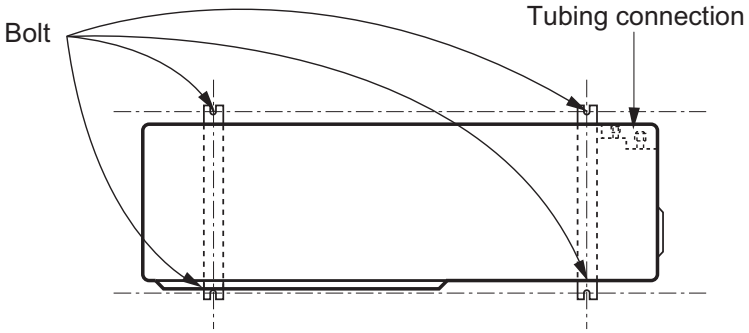


Diagram of lower surface

◆ Settlement draw of outdoor units



⚠ CAUTION

- The ingredients of foundation : Cement : Sand : Gravel for the concrete should 1 : 2 : 4 ratio
- The foundation surface should be finished with mortar.
- The edges of foundation should be rounded.
- A drain passage should be made around the foundation to thoroughly drain water away from the equipment installation area. (Heat pump model)
- If installing the outdoor units on the roof, the roof's strength have to be checked.
- Care should be taken for weather - proofing
- Blocking all gaps of outdoor unit, for passing piping and wiring, using sealing material (Field supply)
  (Animals and bugs might enter in the machine.)

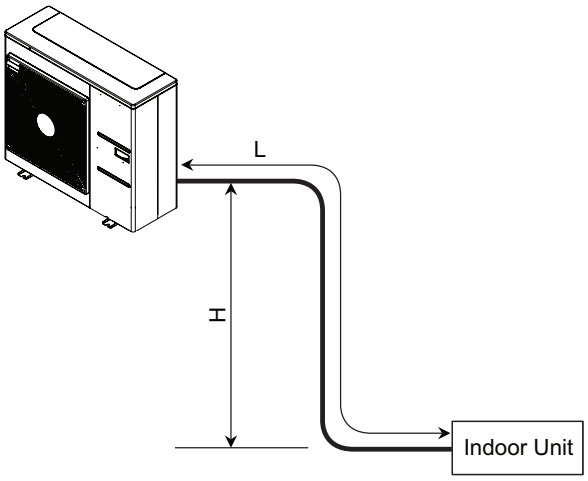
5. Refrigerant piping system

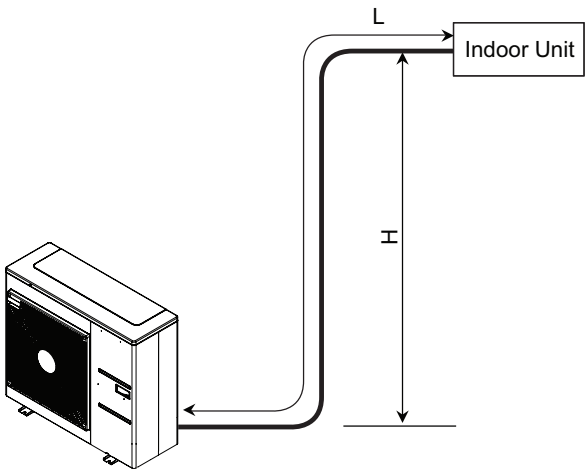
5.1 Piping System between outdoor unit / indoor unit

■ Single type

⚠ CAUTION

- Please check the product type. Piping installation and refrigerant charge varies depending on the type of product.
  For more information, please refer to the installation manual.





Notes
L (m) : Piping Length (Outdoor Unit ~ Indoor Unit)
H (m) : Height Difference (Outdoor Unit ~ Indoor Unit)

❈ Refer to the specifications of Outdoor Unit for Maximum limit.

◆ Refrigerant additional charge calculation method

Additional Refrigerant = (L - A) x a

L (m) : Installed Piping Length (Outdoor Unit ~ Indoor Unit)

A (m) : Charge-less piping length

a (g/m) : Additional charging volume

* Refer to the specifications for detail information of A, a.
* If total additional charge value after calculation comes out to be negative, then do not consider additional charge.

⚠ CAUTION

- Capacity is based on standard length and maximum allowance length is on the basis of reliability.
- Improper refrigerant charge may result in abnormal cycle.

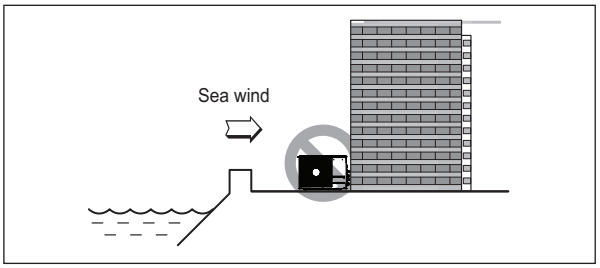
6. Installation guide at the seaside

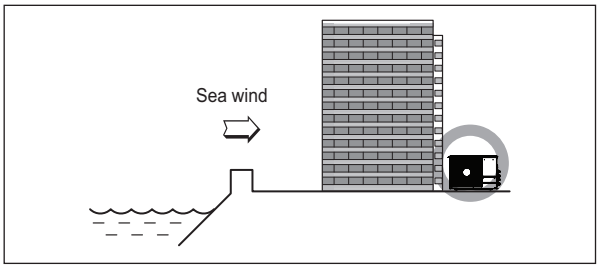
⚠ CAUTION

1. **Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.**
2. **Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunctionor inefficient performance.**
3. **If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise itneeds additional anticorrosion treatment on the heat exchanger.**

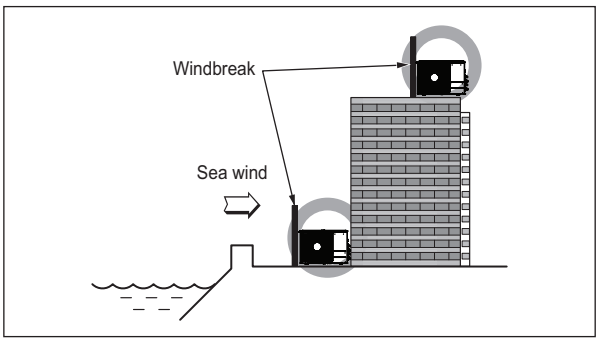
■ Selecting the location(Outdoor Unit)

1. If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.





2. In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It should be kept more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

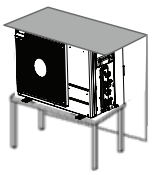
3. Select a well-drained place.

Note

Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water

7. Seasonal wind and cautions in winter

- Sufficient measures are required in a snow area or severe cold area in winter so that product can be operated well.
- Get ready for seasonal wind or snow in winter even in other areas.
- Install a suction and discharge duct not to let in snow or rain.
- Install the outdoor unit not to come in contact with snow directly. If snow piles up and freezes on the air suction hole, the system may malfunction. If it is installed at snowy area, attach the hood to the system.
- Install the outdoor unit at the higher installation console by 50cm than the average snowfall (annual average snowfall) if it is installed at the area with much snowfall.
- Where snow accumulated on the upper part of the Outdoor Unit by more than 10cm, always remove snow for operation.



Note

1. The height of H frame must be more than 2 times the snowfall and its width shall not exceed the width of the product. (If width of the frame is wider than that of the product, snow may accumulate)
2. Don't install the suction hole and discharge hole of the Outdoor Unit facing the seasonal wind.

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The air conditioners manufactured by LG have received ISO9001 certificate for quality assurance and ISO14001 certificate for environmental management system.
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