Airwell

Service Manual

YUDE Series

Indoor Units			Outdoor Units
CADE024	DBDE024	FADE024	YUDE024
CADE030	DBDE030	FADE030	YUDE030
CADE036	DBDE036	FADE036	YUDE036
CADE036	DBDE036	FADE036	YUDE036T

REFRIGERANT

R410A

HEAT PUMP

SM YUDE 2-A.1 GB

SEP-2015

Version:2

LIST OF EFFECTIVE PAGES

Note: Changes in the pages are indicated by a “Revision#” in the footer of each effected page (when none indicates no changes in the relevant page). All pages in the following list represent effected/ non effected pages divided by chapters.

Dates of issue for original and changed pages are:

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* Zero in this column indicates an original page.

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1. INTRODUCTION

1.1 General

The YUDE series DC inverter is major designed for light commercial air-conditioning needs with the DC inverter technology, this series of products provides the most comfort and energy saving. This new line come with the comply to the new ECO Design regulation of 2014.

The outdoor can match following indoors:

-Indoor Floor/Ceiling DCI: 3 sizes including 24/30/36kBtu/h

-Indoor Cassette DCI: 3 sizes including 24/30/36Btu/h

-Indoor Ducted DCI:3 sizes including 24/30/36kBtu/h

The outdoor unit has two options of 1 phase/3 phases:

1 Phase: 3 sizes including 24/30/36kBtu/h

3 Phase: 36kBtu/h

1.2 Main Features

- DCI R410A models
- Auto mode.
- SEER / SCOP A-A level for all models.
- Cooling
- Heating
- Dehumidification
- Sleep mode
- ON/OFF timer
- Auto swing (cassette and floor ceiling)
- 4-dimension swing(cassette only)
- Intelligent deicing
- Memory from power failure
- Cold air prevention in heating
- Self diagnostic (Error indications) for ease of maintenance
- Outdoor -15 C for cooling

1.3 Indoor Unit

The CADE indoor unit is ceiling mounted, the FADE indoor unit is ceiling or floor mounted, the DBDE indoor unit is a low silhouette ducted unit and can be easily fitted to many types of residential and commercials applications.

It includes:

- Coil with hydrophilic aluminum fins.
- Motorized flaps (step motors) for CADE and FADE
- Advanced electronic control box assembly

1.4 Filtration

The series presents air filters:

- Easily accessible, and re-usable pre-filters (mesh)

1.5 Control

The microprocessor indoor controller, and an infrared remote control and wired controller, supplied as standard, provide complete operating function and programming. For further details please refer to the Operation Manual, Appendix A.

1.6 Outdoor Unit

The outdoor units can be installed as floor or wall mounted units by using a wall supporting bracket. The metal sheets are protected by anti- corrosion paint work allowing long life resistance. All outdoor units are pre-charged. For further information please refer to the Product Data Sheet, Chapter 2.

It includes :

- Compressor mounted in a soundproofed compartment :
- Axial fan.
- Outdoor coil with hydrophilic louver fins for RC units.
- Outlet air fan grill.
- Service valves" flare" type connection.

1.7 Tubing Connections

Flare type interconnecting tubing to be produced on site.
For further details please refer to the Installation Manual, Chapter 10.

1.8 Accessories

RCWE Wall Mounted Remote Control

The RCWE remote control is mounted on the wall, and controls the unit either as an infrared remote control or as a wired controller. The wired controller can control up to 10 indoor units with the same program settings and adjustment.
For further details please refer to the Technical Service Manual.

1.9 Inbox Documentation

Each unit is supplied with its own installation and operation manuals.

1.10 Matching Table

OUTDOOR UNITS	INDOOR UNITS		
	AWSI-DBDE024-N11	AWSI-DBDE030-N11	AWSI-DBDE036-N11
	AWSI-CADE024-N11	AWSI-CADE030-N11	AWSI-CADE036-N11
	AWSI-FADE024-N11	AWSI-FADE030-N11	AWSI-FADE036-N11
AWAU-YUDE024-H11	√		
AWAU-YUDE030-H11		√	
AWAU-YUDE036-H11			√
AWAU-YUDE036-H13			√

2. PRODUCT DATA SHEET

2.1 AWSI-DBDE024-N11 // AWAU-YUDE024-H11

Model Indoor Unit				AWAU-DBDE024-N11		
Model Outdoor Unit				AWAU-YUDE024-H11		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling**	**Heating**	
					Average	
Capacity (1)			kW	7,0(2,2-8,5)	8,0(2,4-9,5)	
Pdesign			kW	7,0	7,0	
SEER / SCOP (2)			W/W	5.1	3.8	
Energy efficiency class				A	A	
Annual energy consumption			kWh	480	2579	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating(Indoor-Outdoor)			A	10-20		
Rated power input (Maximum power input)			kW	3,80	4,00	
Rated current (Maximum current)			A	17,5	18,4	
INDOOR	Fan type & quantity			Centrifugal fan-2		
	Fan speeds	H/M/L	RPM	1280/1200/1140/960	1280/1200/1140/960	
	Air flow (3)	H/M/L	m3/hr	1400/1300/1200/1000	1400/1300/1200/1000	
	External static pressure	Min-Max	Pa	25(0-100)		
	Sound power level (4)	H/M/L	dB(A)	64		
	Sound pressure level (5)	H/M/L	dB(A)	47/46/44/40		
	Moisture removal		l/hr	2,3		
	Condensate drain tube I.D		mm	20mm		
	Dimensions	WxHxD	mm	1239x268x558		
	Weight		kg	34		
	Package dimensions	WxHxD	mm	1348x597x283		
	Packaged weight		kg	39		
	Units per pallet		units	7		
	Stacking height		units	7		
OUTDOOR	Refrigerant control			EEV		
	Compressor type, model			Rotary DC Inverter		
	Fan type & quantity			Axial x 1		
	Fan speeds	H/L	RPM	840		
	Air flow	H/L	m3/hr	4000		
	Sound power level(4)	H/L	dB(A)	65		
	Sound pressure level(5)	H/L	dB(A)	57		
	Dimensions	WxHxD	mm	980x790x427		
	Weight		kg	67		
	Package dimensions	WxHxD	mm	1083x855x488		
	Packaged weight		kg	72		
	Units per pallet		Units	6		
	Stacking height		Units	2		
	Refrigerant type			R410A		
	Refrigerant charge (standard connecting tubing length)		kg(5m)	2.2		
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m		
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)		
		Suction line	In.(mm)	5/8"(15.88)		
		Max.tubing length	m.	Max.30		
		Max.height difference	m.	Max.15		
Operation control type				Remote control/Wired Remote control		
Heating elements			kW	-		
Others				-		

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.2 AWSI-FADE024-N11 // AWAU-YUDE024-H11

Model Indoor Unit				AWAU-FADE024-N11	
Model Outdoor Unit				AWAU-YUDE024-H11	
Installation Method of Pipe				Flared	
Characteristics			**Units**	**Cooling**	**Heating**
					Average
Capacity (1)			kW	7,0(2,4-8,2)	8,0(2,4-9,0)
Pdesign			kW	7,0	7,0
SEER / SCOP (2)			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	480	2579
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)			A	10-20	
Rated power input (Maximum power input)			kW	3,80	4,00
Rated current (Maximum current)			A	17,5	18,4
INDOOR	Fan type & quantity			Centrifugal fan-2	
	Fan speeds	H/M/L	RPM	1150/1100/1020/800	1150/1100/1020/800
	Air flow (3)	H/M/L	m3/hr	1200/1000/900/800	1200/1000/900/800
	External static pressure	Min-Max	Pa	0	
	Sound power level (4)	H/M/L	dB(A)	62	
	Sound pressure level (5)	H/M/L	dB(A)	49/48/46/40	
	Moisture removal		l/hr	2,5	
	Condensate drain tube I.D		mm	17	
	Dimensions	WxHxD	mm	1220x225x700	
	Weight		kg	40	
	Package dimensions	WxHxD	mm	1343x823x315	
	Packaged weight		kg	50	
	Units per pallet		units	6	
	Stacking height		units	6	
OUTDOOR	Refrigerant control			EEV	
	Compressor type, model			Rotary DC Inverter	
	Fan type & quantity			Axial x 1	
	Fan speeds	H/L	RPM	840	
	Air flow	H/L	m3/hr	4000	
	Sound power level(4)	H/L	dB(A)	65	
	Sound pressure level(5)	H/L	dB(A)	57	
	Dimensions	WxHxD	mm	980x790x427	
	Weight		kg	67	
	Package dimensions	WxHxD	mm	1083x855x488	
	Packaged weight		kg	72	
	Units per pallet		Units	6	
	Stacking height		Units	2	
	Refrigerant type			R410A	
	Refrigerant charge (standard connecting tubing length)		kg(5m)	2.2	
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)	
		Suction line	In.(mm)	5/8"(15.88)	
		Max.tubing length	m.	Max.30	
		Max.height difference	m.	Max.15	
Operation control type				Remote control/Wired Remote control	
Heating elements			kW	-	
Others				-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.3 AWSI-CADE024-N11 // AWAU-YUDE024-H11

Model Indoor Unit					AWAU-CADE024-N11	
Model Outdoor Unit					AWAU-YUDE024-H11	
Installation Method of Pipe					Flared	
Characteristics				**Units**	**Cooling**	**Heating**
						Average
Capacity (1)				kW	7,0(2,4-8,5)	8,0(2,4-9,5)
Pdesign				kW	7,0	7,2
SEER / SCOP (2)				W/W	5.1	3.8
Energy efficiency class					A	A
Annual energy consumption				kWh	480	2653
Tbiv				°C	N/A	-7
Tol				°C	N/A	-15
Power supply				V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)				A	10-20	
Rated power input (Maximum power input)				kW	3,80	4,00
Rated current (Maximum current)				A	17,5	18,4
INDOOR	Fan type & quantity				Centrifugal fan-2	
	Fan speeds	H/M/L		RPM	650/620/560/500	650/620/560/500
	Air flow (3)	H/M/L		m3/hr	1300	1300
	External static pressure	Min-Max		Pa	0	
	Sound power level (4)	H/M/L		dB(A)	62	
	Sound pressure level (5)	H/M/L		dB(A)	47/46/42/38	
	Moisture removal			l/hr	2,5	
	Condensate drain tube I.D			mm	25mm	
	Dimensions	WxHxD		mm	840x840x240	
	Weight			kg	26	
	Package dimensions	WxHxD		mm	963x963x325	
	Packaged weight			kg	32	
	Units per pallet			units	6	
	Stacking height			units	6	
OUTDOOR	Refrigerant control				EEV	
	Compressor type, model				Rotary DC Inverter	
	Fan type & quantity				Axial x 1	
	Fan speeds	H/L		RPM	840	
	Air flow	H/L		m3/hr	4000	
	Sound power level(4)	H/L		dB(A)	65	
	Sound pressure level(5)	H/L		dB(A)	57	
	Dimensions	WxHxD		mm	980x790x427	
	Weight			kg	67	
	Package dimensions	WxHxD		mm	1083x855x488	
	Packaged weight			kg	72	
	Units per pallet			Units	6	
	Stacking height			Units	2	
	Refrigerant type				R410A	
	Refrigerant charge (standard connecting tubing length)			kg(5m)	2.2	
	Additional charge per 1 meter			gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line		In.(mm)	3/8"(9.53)	
		Suction line		In.(mm)	5/8"(15.88)	
		Max.tubing length		m.	Max.30	
		Max.height difference		m.	Max.15	
Operation control type					Remote control/Wired Remote control	
Heating elements				kW	-	
Others					-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.4 AWSI-DBDE030-N11 // AWAU-YUDE030-H11

Model Indoor Unit				AWAU-DBDE030-N11	
Model Outdoor Unit				AWAU-YUDE030-H11	
Installation Method of Pipe				Flared	
Characteristics			**Units**	**Cooling**	**Heating**
					Average
Capacity (1)			kW	8,3(2,4-8,7)	9,2(2,4-9,9)
Pdesign			kW	8,3	7,6
SEER / SCOP (2)			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	570	2800
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)			A	10-25	
Rated power input (Maximum power input)			kW	3,90	4,10
Rated current (Maximum current)			A	18,1	19,0
INDOOR	Fan type & quantity			Centrifugal fan-2	
	Fan speeds	H/M/L	RPM	1280/1200/1140/960	1280/1200/1140/960
	Air flow (3)	H/M/L	m3/hr	1400/1300/1200/1000	1400/1300/1200/1000
	External static pressure	Min-Max	Pa	37(0-100)	
	Sound power level (4)	H/M/L	dB(A)	64	
	Sound pressure level (5)	H/M/L	dB(A)	47/46/44/40	
	Moisture removal		l/hr	2,3	
	Condensate drain tube I.D		mm	20mm	
	Dimensions	WxHxD	mm	1239x268x558	
	Weight		kg	34	
	Package dimensions	WxHxD	mm	1348x597x283	
	Packaged weight		kg	39	
	Units per pallet		units	7	
	Stacking height		units	7	
OUTDOOR	Refrigerant control			EEV	
	Compressor type, model			Rotary DC Inverter	
	Fan type & quantity			Axial x 1	
	Fan speeds	H/L	RPM	840	
	Air flow	H/L	m3/hr	4000	
	Sound power level(4)	H/L	dB(A)	65	
	Sound pressure level(5)	H/L	dB(A)	58	
	Dimensions	WxHxD	mm	980x790x427	
	Weight		kg	71	
	Package dimensions	WxHxD	mm	1083x855x488	
	Packaged weight		kg	76	
	Units per pallet		Units	6	
	Stacking height		Units	2	
	Refrigerant type			R410A	
	Refrigerant charge (standard connecting tubing length)		kg(5m)	2.4	
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)	
		Suction line	In.(mm)	5/8"(15.88)	
		Max.tubing length	m.	Max.30	
		Max.height difference	m.	Max.15	
Operation control type				Remote control/Wired Remote control	
Heating elements			kW	-	
Others				-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.5 AWSI-FADE030-N11 // AWAU-YUDE030-H11

Model Indoor Unit					AWAU-FADE030-N11	
Model Outdoor Unit					AWAU-YUDE030-H11	
Installation Method of Pipe					Flared	
Characteristics				**Units**	**Cooling**	**Heating**
						Average
Capacity (1)				kW	8,5(2,6-9,2)	9,2(2,4-9,9)
Pdesign				kW	8,5	7,6
SEER / SCOP (2)				W/W	5.1	3.8
Energy efficiency class					A	A
Annual energy consumption				kWh	583	2800
Tbiv				°C	N/A	-7
Tol				°C	N/A	-15
Power supply				V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)				A	10-25	
Rated power input (Maximum power input)				kW	3,90	4,10
Rated current (Maximum current)				A	18,1	19,0
INDOOR	Fan type & quantity				Centrifugal fan-2	
	Fan speeds	H/M/L		RPM	1050/1000/960/740	1050/1000/960/740
	Air flow (3)	H/M/L		m3/hr	1500/1400/1200/1000	1500/1400/1200/1000
	External static pressure	Min-Max		Pa	0	
	Sound power level (4)	H/M/L		dB(A)	62	
	Sound pressure level (5)	H/M/L		dB(A)	49/46/44/38	
	Moisture removal			l/hr	3,0	
	Condensate drain tube I.D			mm	17	
	Dimensions	WxHxD		mm	1420x245x700	
	Weight			kg	48	
	Package dimensions	WxHxD		mm	1548x828x345	
	Packaged weight			kg	56	
	Units per pallet			units	6	
	Stacking height			units	6	
OUTDOOR	Refrigerant control				EEV	
	Compressor type, model				Rotary DC Inverter	
	Fan type & quantity				Axial x 1	
	Fan speeds	H/L		RPM	840	
	Air flow	H/L		m3/hr	4000	
	Sound power level(4)	H/L		dB(A)	65	
	Sound pressure level(5)	H/L		dB(A)	58	
	Dimensions	WxHxD		mm	980x790x427	
	Weight			kg	71	
	Package dimensions	WxHxD		mm	1083x855x488	
	Packaged weight			kg	76	
	Units per pallet			Units	6	
	Stacking height			Units	2	
	Refrigerant type				R410A	
	Refrigerant charge (standard connecting tubing length)			kg(5m)	2.4	
	Additional charge per 1 meter			gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line		In.(mm)	3/8"(9.53)	
		Suction line		In.(mm)	5/8"(15.88)	
		Max.tubing length		m.	Max.30	
		Max.height difference		m.	Max.15	
Operation control type					Remote control/Wired Remote control	
Heating elements				kW	-	
Others					-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.6 AWSI-CADE030N11 // AWAU-YUDE030-H11

Model Indoor Unit				AWAU-CADE030-N11	
Model Outdoor Unit				AWAU-YUDE030-H11	
Installation Method of Pipe				Flared	
Characteristics			**Units**	**Cooling**	**Heating**
					Average
Capacity (1)			kW	8,3(2,6-9,2)	9,2(2,4-9,9)
Pdesign			kW	8,3	7,6
SEER / SCOP (2)			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	570	2800
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)			A	10-25	
Rated power input (Maximum power input)			kW	3,90	4,10
Rated current (Maximum current)			A	18,1	19,0
INDOOR	Fan type & quantity			Centrifugal fan-2	
	Fan speeds	H/M/L	RPM	620/580/530/410	620/580/530/410
	Air flow (3)	H/M/L	m3/hr	1500	1500/
	External static pressure	Min-Max	Pa	0	
	Sound power level (4)	H/M/L	dB(A)	63	
	Sound pressure level (5)	H/M/L	dB(A)	49/48/45/40	
	Moisture removal		l/hr	3,0	
	Condensate drain tube I.D		mm	25	
	Dimensions	WxHxD	mm	840x840x320	
	Weight		kg	31	
	Package dimensions	WxHxD	mm	963x963x409	
	Packaged weight		kg	38	
	Units per pallet		units	5	
	Stacking height		units	5	
OUTDOOR	Refrigerant control			EEV	
	Compressor type, model			Rotary DC Inverter	
	Fan type & quantity			Axial x 1	
	Fan speeds	H/L	RPM	840	
	Air flow	H/L	m3/hr	4000	
	Sound power level(4)	H/L	dB(A)	65	
	Sound pressure level(5)	H/L	dB(A)	58	
	Dimensions	WxHxD	mm	980x790x427	
	Weight		kg	71	
	Package dimensions	WxHxD	mm	1083x855x488	
	Packaged weight		kg	76	
	Units per pallet		Units	6	
	Stacking height		Units	2	
	Refrigerant type			R410A	
	Refrigerant charge (standard connecting tubing length)		kg(5m)	2.4	
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)	
		Suction line	In.(mm)	5/8"(15.88)	
		Max.tubing length	m.	Max.30	
		Max.height difference	m.	Max.15	
Operation control type				Remote control/Wired Remote control	
Heating elements			kW	-	
Others				-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.7 AWSI-DBDE036-N11 // AWAU-YUDE036-H11

Model Indoor Unit				AWAU-DBDE036-N11	
Model Outdoor Unit				AWAU-YUDE036-H11	
Installation Method of Pipe				Flared	
Characteristics			**Units**	**Cooling**	**Heating**
					Average
Capacity (1)			kW	10,0(3,2-11,5)	12,0(2,9-14,5)
Pdesign			kW	10,0	10,4
SEER / SCOP (2)			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	687	3832
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)			A	10-32	
Rated power input (Maximum power input)			kW	4,65	4,75
Rated current (Maximum current)			A	21,5	22,0
INDOOR	Fan type & quantity			Centrifugal fan-2	
	Fan speeds	H/M/L	RPM	1380/1350/1200/1050	1380/1350/1200/1050
	Air flow (3)	H/M/L	m3/hr	2100/1950/1800/1700	2100/1950/1800/1700
	External static pressure	Min-Max	Pa	37(0-150)	
	Sound power level (4)	H/M/L	dB(A)	64	
	Sound pressure level (5)	H/M/L	dB(A)	53/52/48/44	
	Moisture removal		l/hr	2,3	
	Condensate drain tube I.D		mm	20mm	
	Dimensions	WxHxD	mm	1226x290x775	
	Weight		kg	46	
	Package dimensions	WxHxD	mm	1338x877x305	
	Packaged weight		kg	63	
	Units per pallet		units	6	
	Stacking height		units	6	
OUTDOOR	Refrigerant control			EEV	
	Compressor type, model			Rotary DC Inverter	
	Fan type & quantity			Axial x 1	
	Fan speeds	H/L	RPM	900	
	Air flow	H/L	m3/hr	5300	
	Sound power level(4)	H/L	dB(A)	70	
	Sound pressure level(5)	H/L	dB(A)	63	
	Dimensions	WxHxD	mm	1107x1100x440	
	Weight		kg	92	
	Package dimensions	WxHxD	mm	1158x1235 x493	
	Packaged weight		kg	100	
	Units per pallet		Units	6	
	Stacking height		Units	2	
	Refrigerant type			R410A	
	Refrigerant charge (standard connecting tubing length)		kg(5m)	3,5	
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)	
		Suction line	In.(mm)	5/8"(15.88)	
		Max.tubing length	m.	Max.30	
		Max.height difference	m.	Max.15	
Operation control type				Remote control/Wired Remote control	
Heating elements			kW	-	
Others				-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.8 AWSI-FADE036-N11 // AWAU-YUDE036-H11

Model Indoor Unit				AWAU-FADE036-N11	
Model Outdoor Unit				AWAU-YUDE036-H11	
Installation Method of Pipe				Flared	
Characteristics			**Units**	**Cooling**	**Heating**
					Average
Capacity (1)			kW	10,0(3,2-11,5)	12,0(2,9-14,5)
Pdesign			kW	10,0	10,4
SEER / SCOP (2)			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	687	3832
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating(Indoor-Outdoor)			A	10-32	
Rated power input (Maximum power input)			kW	4,75	4,85
Rated current (Maximum current)			A	22,0	22,5
INDOOR	Fan type & quantity			Centrifugal fan-2	
	Fan speeds	H/M/L	RPM	1200/1150/1000/860	1200/1150/1000/860
	Air flow (3)	H/M/L	m3/hr	1900/1630/1520/1350	1900/1630/1520/1350
	External static pressure	Min-Max	Pa	0	
	Sound power level (4)	H/M/L	dB(A)	65	
	Sound pressure level (5)	H/M/L	dB(A)	54/53/51/46	
	Moisture removal		l/hr	3,8	
	Condensate drain tube I.D		mm	17	
	Dimensions	WxHxD	mm	1420x245x700	
	Weight		kg	48	
	Package dimensions	WxHxD	mm	1548x828x345	
	Packaged weight		kg	56	
	Units per pallet		units	6	
	Stacking height		units	6	
OUTDOOR	Refrigerant control			EEV	
	Compressor type, model			Rotary DC Inverter	
	Fan type & quantity			Axial x 1	
	Fan speeds	H/L	RPM	900	
	Air flow	H/L	m3/hr	5300	
	Sound power level(4)	H/L	dB(A)	70	
	Sound pressure level(5)	H/L	dB(A)	63	
	Dimensions	WxHxD	mm	1107x1100x440	
	Weight		kg	92	
	Package dimensions	WxHxD	mm	1158x1235 x493	
	Packaged weight		kg	100	
	Units per pallet		Units	6	
	Stacking height		Units	2	
	Refrigerant type			R410A	
	Refrigerant charge (standard connecting tubing length)		kg(5m)	3,5	
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m	
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)	
		Suction line	In.(mm)	5/8"(15.88)	
		Max.tubing length	m.	Max.30	
		Max.height difference	m.	Max.15	
Operation control type				Remote control/Wired Remote control	
Heating elements			kW	-	
Others				-	

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

2.9 AWSI-CADE036-N11 // AWAU-YUDE036-H11

Model Indoor Unit				AWAU-CADE036-N11		
Model Outdoor Unit				AWAU-YUDE036-H11		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling**	**Heating**	
					Average	
Capacity (1)			kW	10,0(3,2-11,5)	12,0(2,9-14,5)	
Pdesign			kW	10,0	10,4	
SEER / SCOP (2)			W/W	5.1	3.8	
Energy efficiency class				A	A	
Annual energy consumption			kWh	687	3832	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating(Indoor-Outdoor)			A	10-32		
Rated power input (Maximum power input)			kW	4,65	4,85	
Rated current (Maximum current)			A	21,5	22,5	
INDOOR	Fan type & quantity			Centrifugal fan-2		
	Fan speeds	H/M/L	RPM	720/680/600/520	720/680/600/520	
	Air flow (3)	H/M/L	m3/hr	1850	1850	
	External static pressure	Min-Max	Pa	0		
	Sound power level (4)	H/M/L	dB(A)	63		
	Sound pressure level (5)	H/M/L	dB(A)	51/49/46/43		
	Moisture removal		l/hr	3,8		
	Condensate drain tube I.D		mm	25mm		
	Dimensions	WxHxD	mm	840x840x320		
	Weight		kg	31		
	Package dimensions	WxHxD	mm	963x963x409		
	Packaged weight		kg	38		
	Units per pallet		units	5		
	Stacking height		units	5		
OUTDOOR	Refrigerant control			EEV		
	Compressor type, model			Rotary DC Inverter		
	Fan type & quantity			Axial x 1		
	Fan speeds	H/L	RPM	900		
	Air flow	H/L	m3/hr	5300		
	Sound power level(4)	H/L	dB(A)	70		
	Sound pressure level(5)	H/L	dB(A)	63		
	Dimensions	WxHxD	mm	1107x1100x440		
	Weight		kg	92		
	Package dimensions	WxHxD	mm	1158x1235 x493		
	Packaged weight		kg	100		
	Units per pallet		Units	6		
	Stacking height		Units	2		
	Refrigerant type			R410A		
	Refrigerant charge (standard connecting tubing length)		kg(5m)	3,5		
	Additional charge per 1 meter		gr / 1m	5m<L<30m 60g/m		
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)		
		Suction line	In.(mm)	5/8"(15.88)		
		Max.tubing length	m.	Max.30		
		Max.height difference	m.	Max.15		
Operation control type				Remote control/Wired Remote control		
Heating elements			kW	-		
Others				-		

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).
(2) SEER / SCOP calculation accordance with EN14825.
(3) Airflow in ducted units; at nominal external static pressure.
(4) Sound power in ducted units is measured at air discharge.
(5) Sound pressure level measured at 1.4 meter distance from unit.

3. RATING CONDITIONS

Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units).

Cooling:
Indoor: 27ºC DB 19ºC WB
Outdoor: 35 ºC DB

Heating:
Indoor: 20ºC DB
Outdoor: 7ºC DB 6ºC WB

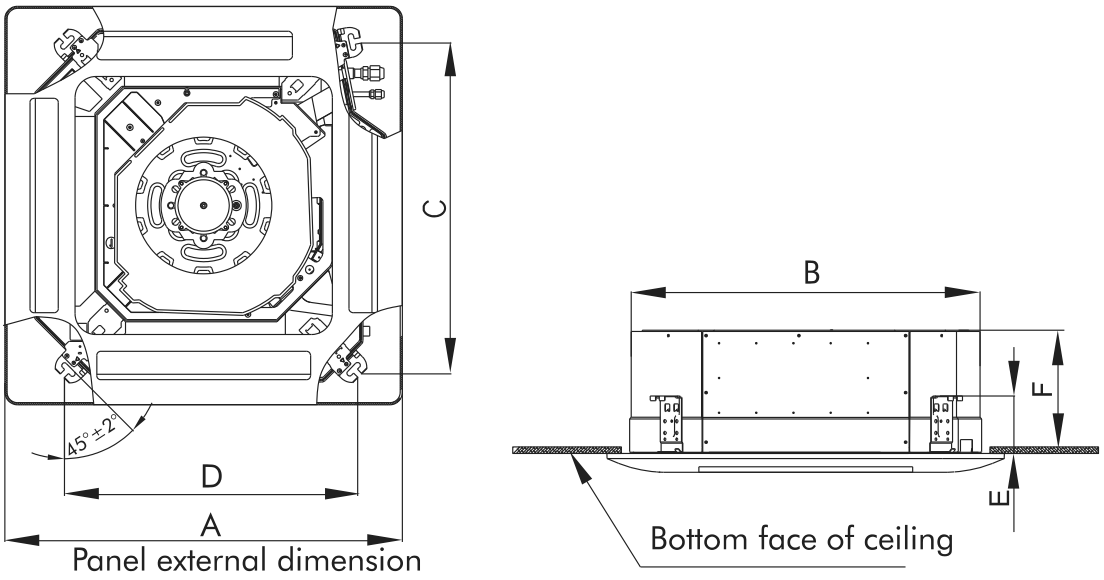
3.1 Operating Limits

R410A

		Indoor	Outdoor
Cooling	Upper limit	32ºC DB 23ºC WB	48ºC DB
	Lower limit	21ºC DB 15ºC WB	-15ºC DB
Heating	Upper limit	27ºC DB	24ºC DB 18ºC WB
	Lower limit	10ºC DB	-15ºC DB
Voltage	1PH	198 – 264 V	
	3PH	360 – 440 V	

4. OUTLINE DIMENSIONS

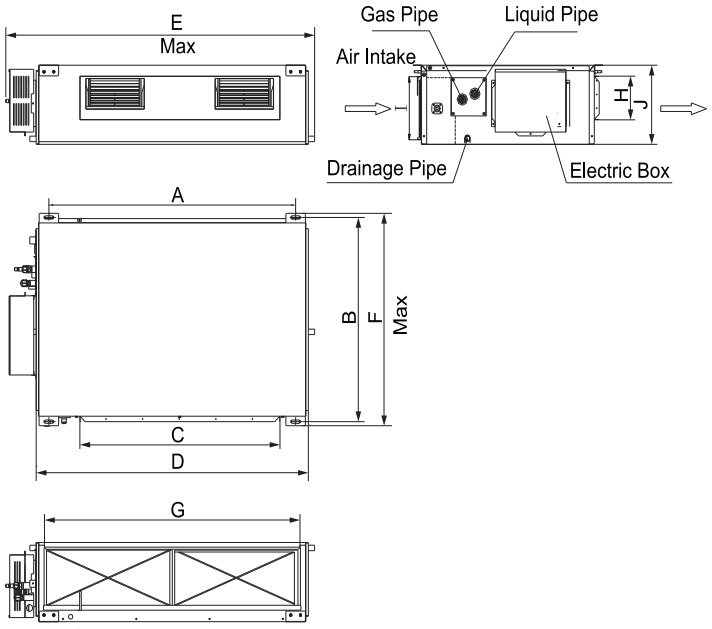
4.1 CADE024-030-036



Unit:mm

Model	A	B	C	D	E	F
CADE024	950	840	780	680	160	240
CADE030/036	950	840	780	680	160	320

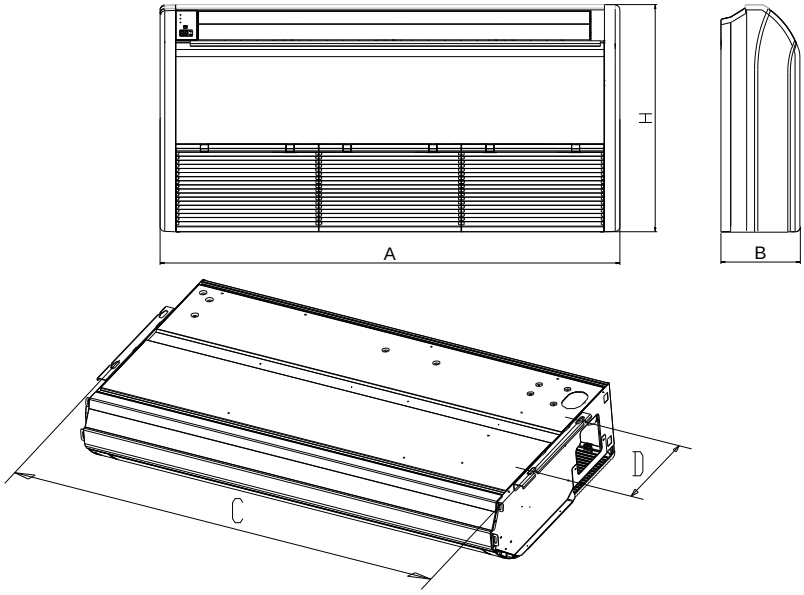
4.2 DBDE 024-030-036



Unit: mm

	A	B	C	D	E	F	G	H	I	J
DBDE024	1101	515	820	1159	1239	558	1002	160	235	268
DBDE030	1101	515	820	1159	1239	558	1002	160	235	268
DBDE036	1011	748	820	1115	1226	775	979	160	231	290

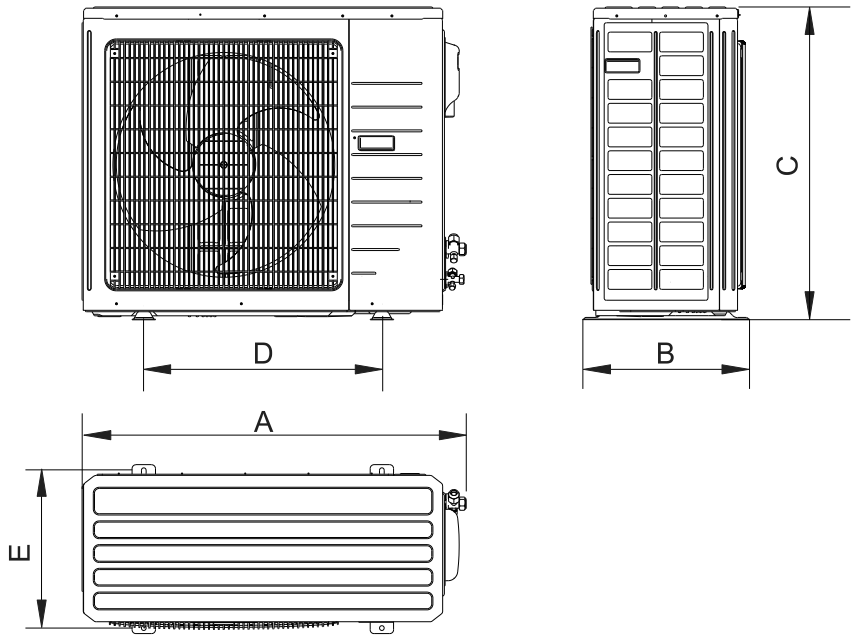
4.3 FADE024-030-036



Unit: mm

Model	A	B	C	D	H
FADE024	1220	225	1158	280	700
FADE030	1420	245	1354	280	700
FADE036	1420	245	1354	280	700

4.4 Outdoor Unit:



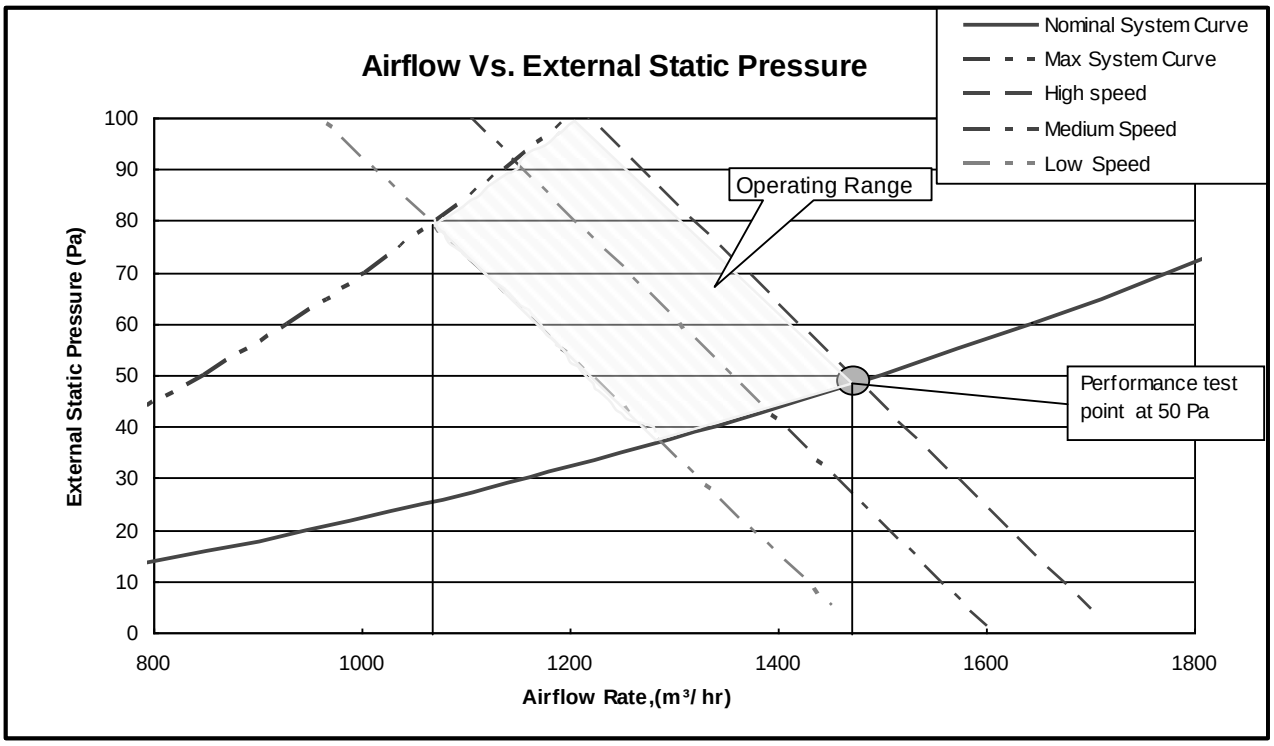
Unit: mm

Model	A	B	C	D	E
YUDE024	980	427	790	610	390
YUDE030	980	427	790	610	390
YUDE036	1107	440	1100	631	400

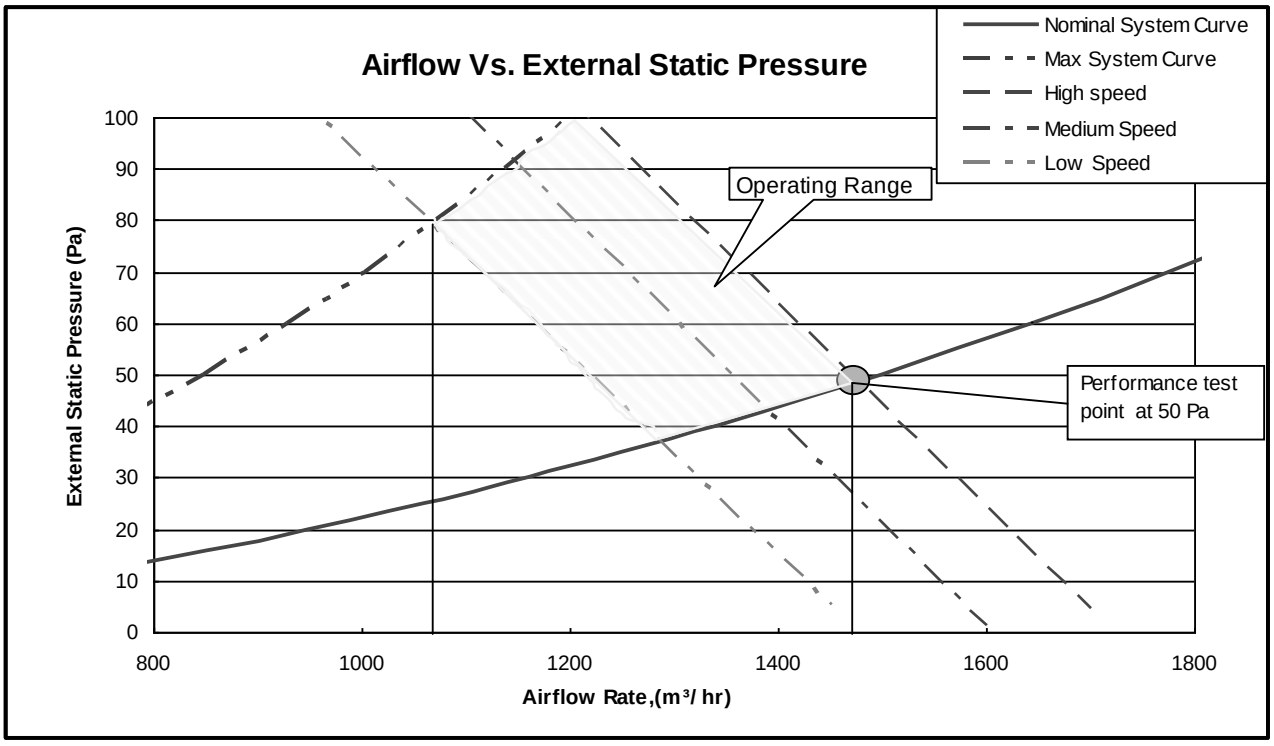
5. PERFORMANCE DATA

6. AIRFLOW CURVES

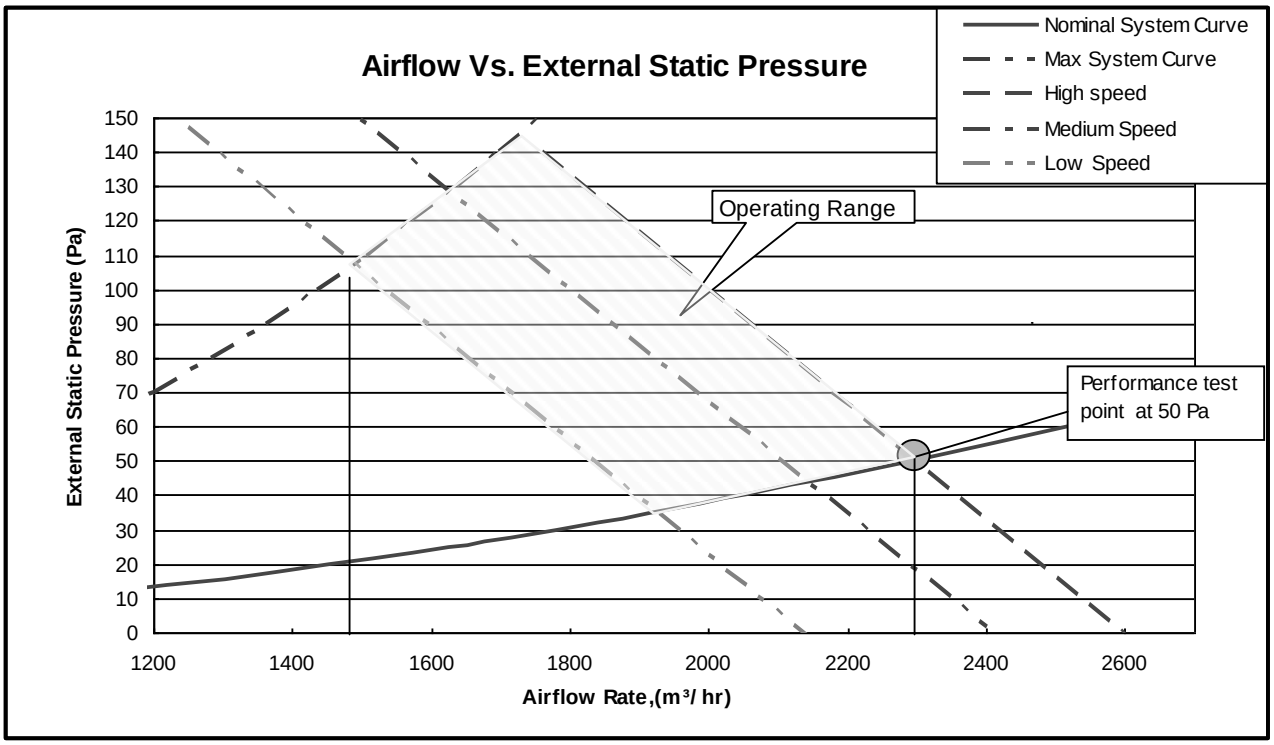
6.1 Model: AWSI-DBDE024-N11



6.2 Model: AWSI-DBDE030-N11



6.3 Model: **AWSI-DBDE036-N11**



7. ELECTRICAL DATA

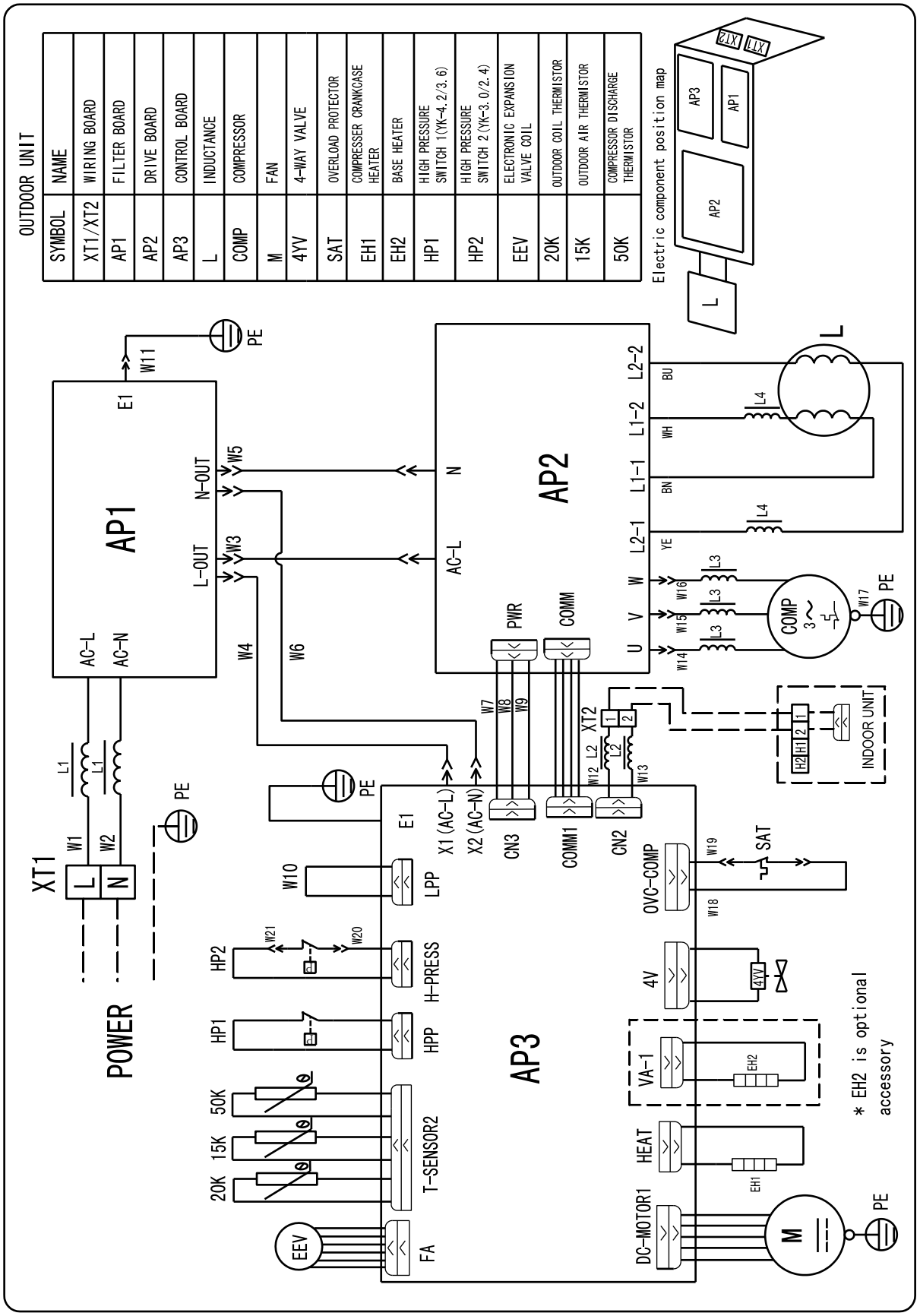
MODEL	AWAU-YUDE024-H11	AWAU-YUDE030-H11	AWAU-YUDE036-H11	AWAU-YUDE036-H13
Power Supply	Separately			
	1~/220-240V/50Hz			3~/380-415V/ 50Hz
Capability of Air Switch(A) (Indoor)	10A			
Capability of Air Switch(A) (Outdoor)	20A	25A	32A	32A
Power Supply Wiring No. X Cross Section mm^2 (ODU)	3x4.0mm2			5x2.5mm2
Power Supply Wiring No. X Cross Section mm^2 (IDU)	3 x1.5mm2			
Interconnecting Cable Model No. X Cross Section mm^2	2x0.75mm2			

NOTE

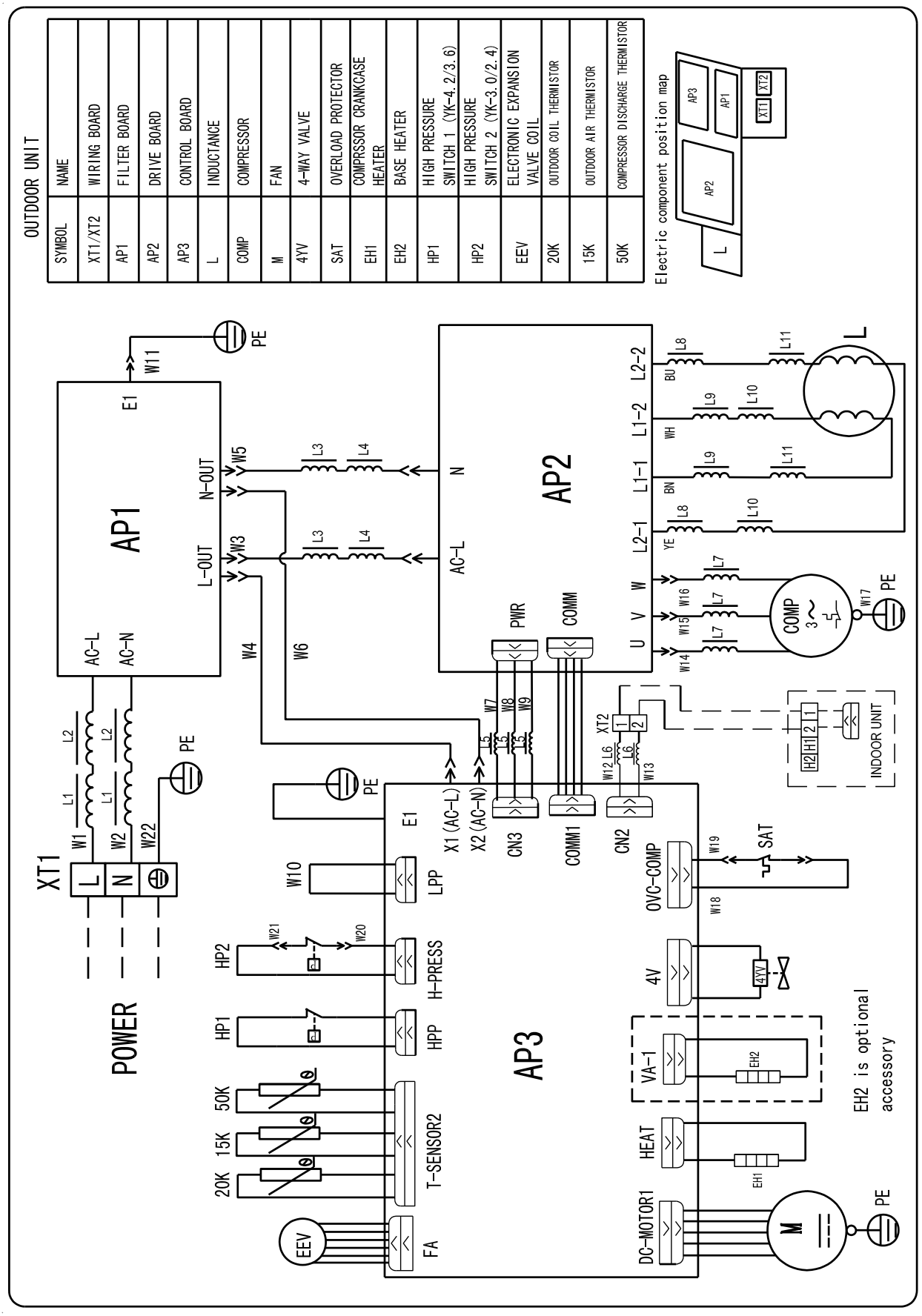
Power wiring cord should comply with local lows and electrical regulations requirements.

8. WIRING DIAGRAMS

8.1 AWAU-YUDE024-H11, AWAU-YUDE030-H11

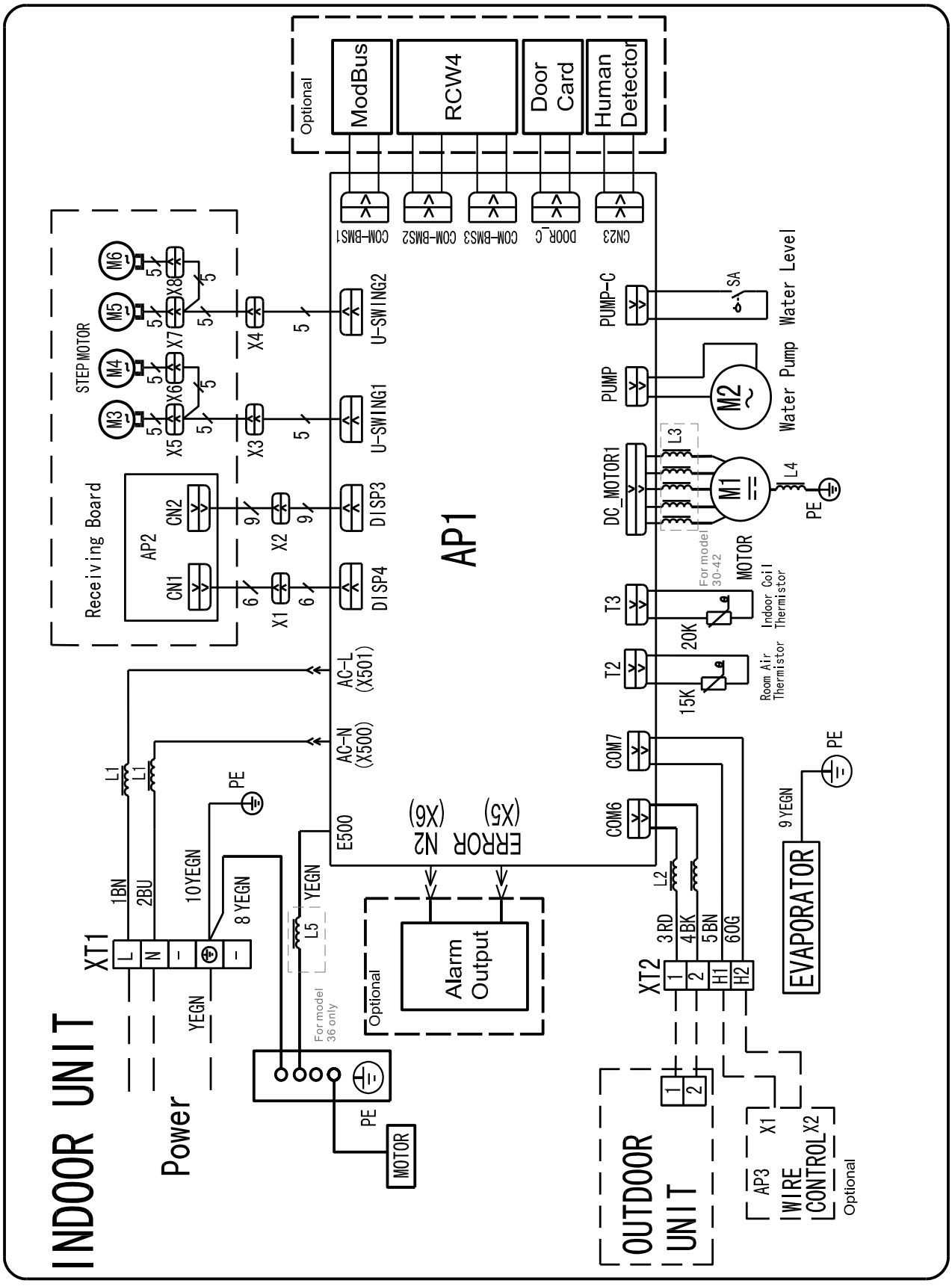


8.2 AWAU-YUDE036-H11

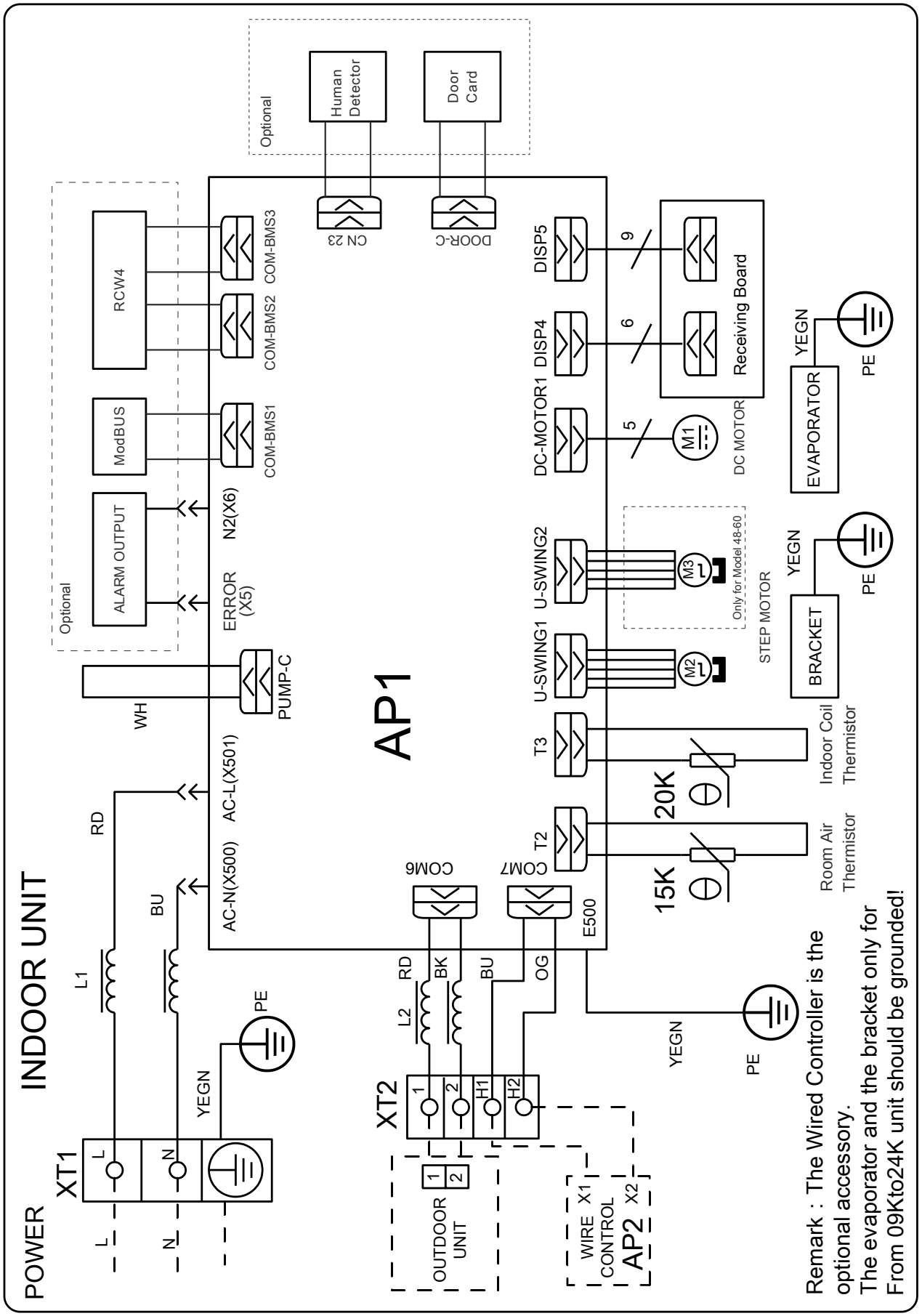


8.3 AWAU-YUDE036-H13 (TBD)

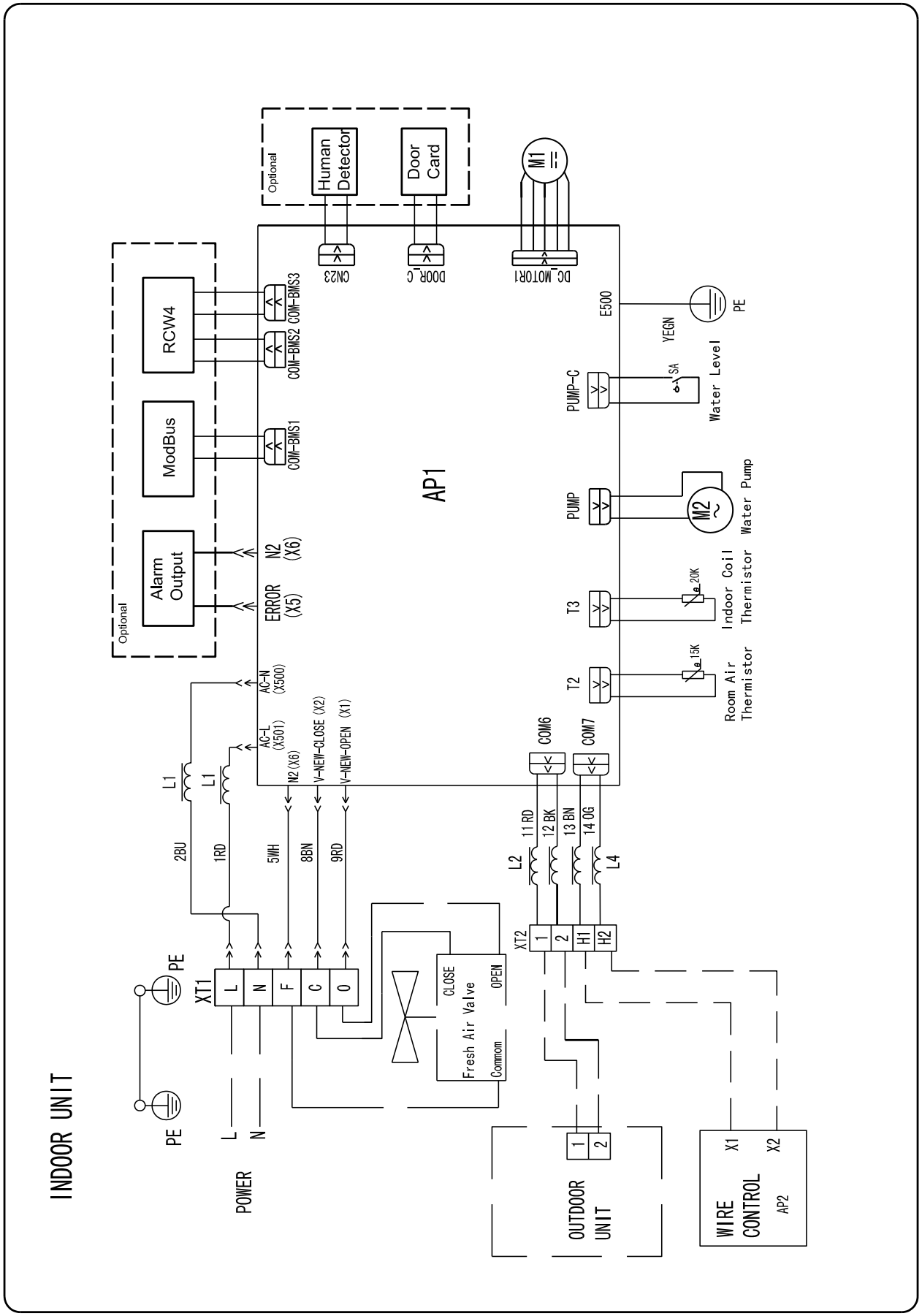
8.4 AWSI-CADE024/030/036-N11



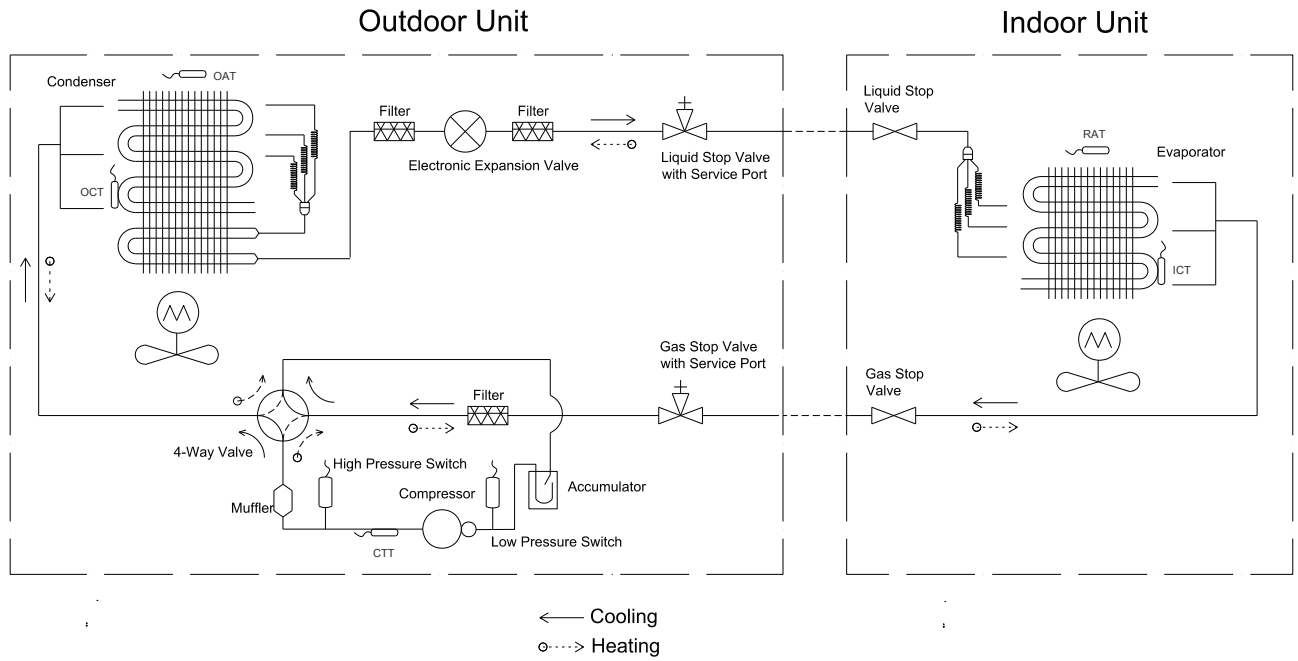
8.5 AWSI-FADE024/030/036-N11



8.6 AWSI-DBD024/030/036-N11



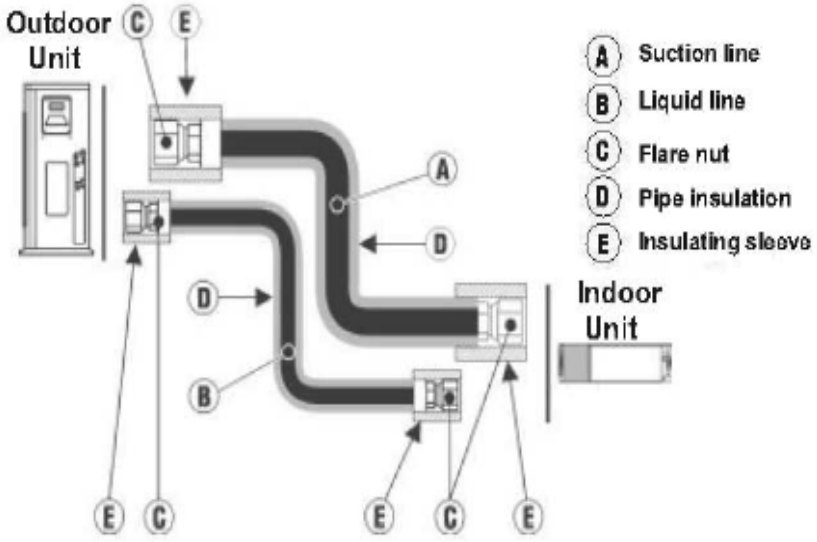
9. REFRIGERATION DIAGRAMS

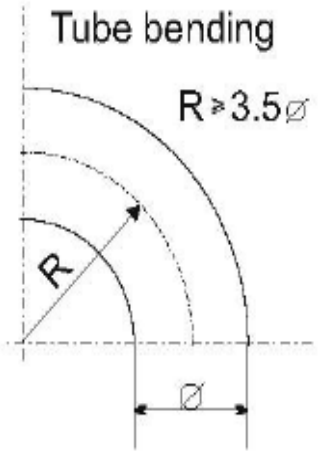


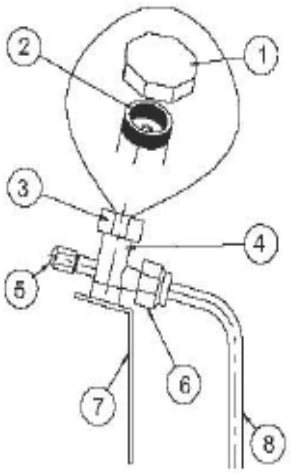
Note:

CTT: Compressor Discharging Temperature Sensor
OCT: Outdoor Coil Temperature Sensor
OAT: Outdoor Air Temperature Sensor
ICT: Indoor Coil Temperature Sensor
RAT: Room Air Temperature Sensor

10. TUBING CONNECTIONS







TUBE (Inch) / TORQUE (Nm)	1/4"	3/8"	1/2"	5/8"	3/4"
Flare Nuts	15-18	40-45	60-65	70-75	80-85
Valve Cap	13-20	13-20	18-25	18-25	40-50
Service Port Cap	11-13	11-13	11-13	11-13	11-13

1. Valve Protection Cap-end
2. Refrigerant Valve Port (use Allen wrench to open/close)
3. Valve Protection Cap
4. Refrigerant Valve
5. Service Port Cap
6. Flare Nut
7. Unit Back Side
8. Copper Tube

When the outdoor unit is installed above the indoor unit an oil trap is required every 5m along the suction line at the lowest point of the riser. In case the indoor unit is installed above the outdoor, no trap is required.

11. CONTROL SYSTEM

11.1 Electronic Control

11.1.1 Abbreviations

Abbreviation	Definition
A/C	Air Condition
BMS	Building Management System
PWR	System Power
CTT	Compressor Top Temperature sensor
DCI	DC Inverter
EEV	Electronic Expansion Valve
HE	Heating Element
HMI	Human Machine Interface
HST	Heat Sink Temperature sensor
Hz	Hertz (1/sec) – electrical frequency
ICT	Indoor Coil Temperature (RT2) sensor
IDU	Indoor Unit
MCU	Micro Controller Unit
OAT	Outdoor Air Temperature sensor
OCT	ODU Coil Temperature sensor
ODU	Outdoor Unit
OFAN	Outdoor Fan
PFC	Power Factor Corrector
RAC	Residential A/C
RC	Reverse Cycle (Heat Pump)
RGT	Return Gas Temperature sensor
RPS	Rounds per second (mechanical speed)
RV	Reverse Valve
SB,STBY	Stand By
SUCT	Compressor Suction Temperature sensor
S/W	Software
TBD	To Be Defined
TMR	Timer

11.1.2 System Operation Concept

The control function is divided between indoor and outdoor unit controllers. Indoor unit is the system 'Master', requesting the outdoor unit for cooling/heating capacity supply. The outdoor unit is the system 'Slave' and it must supply the required capacity unless it enters into a protection mode avoiding it from supplying the requested capacity.
Target frequency is transferred via indoor to outdoor communication, and the calculation is based on room temperature and set point temperature.

11.1.3 Compressor Frequency Control

The Compressor Frequency Control is based on the PI scheme.
When starting the compressor, or when conditions are varied due to the change of the room condition, the frequency must be initialized according to the **ΔD** value of the indoor unit and the **Q** value of the indoor unit.
Q value: Indoor unit output determined from indoor unit capacity, air flow rate and other factors.

1. P control
Calculate **ΔD** value in each sampling time (20 seconds), and adjust the frequency according to its difference from the frequency previously calculated.

2. I control
If the operating frequency is not change more than a certain fixed time, adjust the frequency up and down according to the **ΔD** value.
Obtaining the fixed **ΔD** value
When the **ΔD** value is small- decrease the frequency
When the **ΔD** value is large- increase the frequency
3. Frequency management when other controls are functioning
When frequency is drooping;
Frequency management is carried out only when the frequency droops.
For limiting lower limit
Frequency management is carried out only when the frequency rises.
4. Maximum and minimum limits of frequency by PI control
The frequency upper and lower limits are set depending on indoor unit.
When low noise commands come from the indoor unit or when outdoor unit low noise or quiet commands come from indoor unit, the upper limit frequency must be lowered than the usual setting.

11.1.3.1 Frequency range

The compressor frequency limitation is set by the following table

Mode	Minimum Frequency(MinFreq)			
	YUDE024	YUDE030	YUDE036	YUDE036T
Cooling	*15*	*15*	15	15
Heating	*15*	*15*	15	5

The maximum allowed frequency is extracted from the following:

Mode	ODU / IDU	Maximum Frequency(MaxFreq)			
		YUDE024	YUDE030	YUDE036	YUDE036T
Cooling	**DBDE**	85	85	80	80
	CADE	85	85	80	80
	FADE	85	85	80	80
Heating	**DBDE**	85	85	80	80
	CADE	85	85	80	80
	FADE	85	85	80	80

11.1.3.2 Frequency Changes Control

Frequency change rate is 1 Hz/sec.

11.1.3.3 Minimum On and Off Time

Prohibit turning ON the compressor for 3 minutes after turning it off.(except during deicing protection)

11.1.4 Indoor Fan Control

4 Indoor fan speeds are determined for each model.

The cassette unit indoor fan speed table

Unit Model	Super High	High	Medium	Low
CADE024	650	620	560	500
CADE030	620	580	530	410
CADE036	720	680	600	520

The floor/ceiling cassette unit indoor fan speed table

Unit Model	Super High	High	Medium	Low
FADE24	1150	1100	1020	800
FADE30	1050	1000	960	740
FADE36	1200	1150	1000	860

The duct unit indoor fan speed table

Unit Model	Super High	High	Medium	Low
DBDE024	1280	1200	1140	960
DBDE030	1280	1200	1140	960
DBDE036	1380	1350	1200	1050

In high/ medium/ low indoor fan user setting, unit will operate fan in selected speed.

In Auto Fan user setting, fan speed will be adjusted automatically according to the difference between actual room temperature(RAT) and user set point temperature(SPT).

Indoor Fan speed		High	Medium	Low
RAT-SPT	Cooling	>=2	(0,2)	<=0
	Heating	<=1	(1,3)	>=3

In DRY mode, the automatic fan speed is forced to be low.

11.1.4.1 Turbo Speed

In COOL and HEAT mode (not available in AUTO, DRY, FAN mode), press the Turbo button, the super high fan speed is selected on Remote control and the indoor fan rotates at high speed.

11.1.5 Outdoor Fan Control

11.1.5.1OFAN Speed Type

The outdoor fan motor is DC motor with 10 defined speeds.

11.1.5.2General rules

1. The outdoor fan is ON when compressor ON during cooling,dring and heating mode.
2. When the unit is off by remote control, in safety stops and stop after reaching to the temperature point, the outdoor fan stops;
3. The outdoor fan is ON 30 sec ahead compressor start
4. Outdoor fan OFF will delay 60sec when compressor is OFF during cooling, dring and heating mode.

11.1.5.3OFAN control in cooling mode:

If HPS2 is cut off (Pressure higher than 3.0Mpa), the OFAN will go to high fan speed. If the HPS2 is recovery (pressure is 2.4MPa), the OFAN speed will reduce by 1 speed until the pressure is reaching 3.0MPa.
This control is performed every 1 hour or pressure is below 2.4MPa.

11.1.5.4OFAN control in heating mode:

OFAN will keep high fan speed

11.1.6 Refrigerant control

11.1.6.1EEV is used for all model

1. EEV operation after power-on: When power on, EEV will open 240steps and then move back with 540steps. This position will be recognized as 0. Then EEV will open to 480 steps and be ready for system operating.
2. EEV openloop depends on OAT,RAT,SPT and compressor frequency after compressor starts to operate.
3. Target CTT control will be performed after compressor operates for 5min.
4. The EEV opening will be updated every 5s.

11.1.7 Reversing Valve (RV) Control

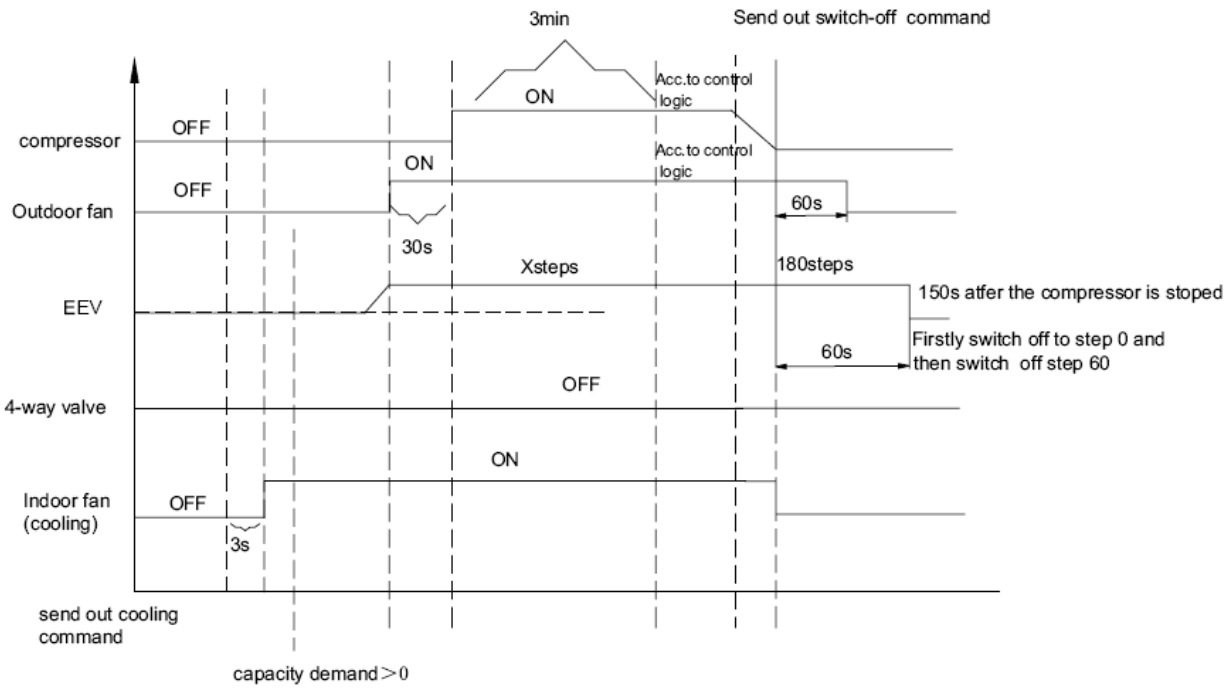
Reversing valve is on in heat mode.
RV ON will delay 10 sec when compressor is ON and Switching of RV state is done only after compressor is off for over 2 minutes.

11.2 Fan Mode

In this mode, the indoor fan may run at high,medium,low and automatic speed. The compressor, outdoor fan and 4-way valve will be OFF.
In this mode, the range of setting temperature is 16~30C

11.3 Cool Mode

If Load>0, the unit starts cooling operation. In this case, the compressor and outdoor fan will operate and the indoor fan will run at the setting speed.
If Load≤0, the compressor will stop operation and the outdoor fan will delay 60 seconds to stop.



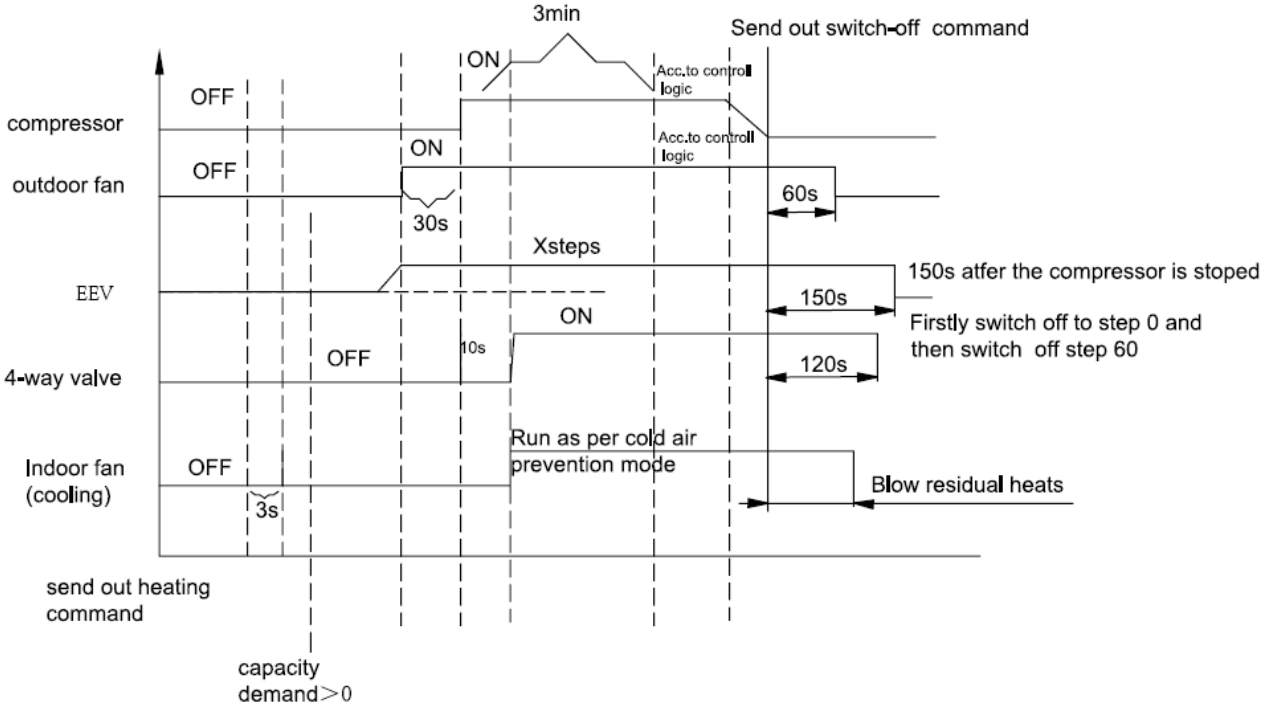
11.3.1 Indoor Fan operation under Cool Mode

The indoor fan will run at high speed for 5 seconds before it is put into operation according to the setting then run at the setting speed.

In Auto Fan user setting, fan speed will be adjusted automatically according to the SPT and RAT, refer to 11.1.4

11.4 Heat Mode

If Load >0, the unit will operate in heating mode. The compressor, outdoor fan and 4-way valve will operate and the indoor fan will delay 1'30" to start at the latest
If LoadAT≤0, the compressor will stop operation and the outdoor fan will delay 60 seconds to stop. And the indoor fan will blow for 60s at low fan speed for cassette and floor ceiling model and at setting fan speed for duct model. During this period, the fan speed can't be switched.



11.4.1 Indoor Fan Control in Heat Mode

Indoor fan speed depends on the indoor coil temperature

Anti-cold air function
When starting the heating mode, anti-cold air function will be activated and indoor fan can run at low speed or stop running. This function will terminate after the unit runs for 1.5min.
Residual heat blowing function
During heating, when the stopping condition for the compressor is reached. The indoor fan will blow for 60s at low fan speed for floor ceiling model and at setting fan speed for duct model. For cassette unit the indoor fan will operate continuously in low fan speed until compressor restarting.

During this period, the fan speed can't be switched.
For manual OFF condition, the residual heat blowing function will last 60s for all indoor models.

11.5 Auto Cool/Heat Mode

In AUTO mode, the system selects the running mode (COOL/HEAT/FAN) automatically according to the room temperature. The display shows the actual running mode and setting temperature. There will be 30s delay for mode conversion.
1. When RAT≥26 degree, the cooling mode is selected.

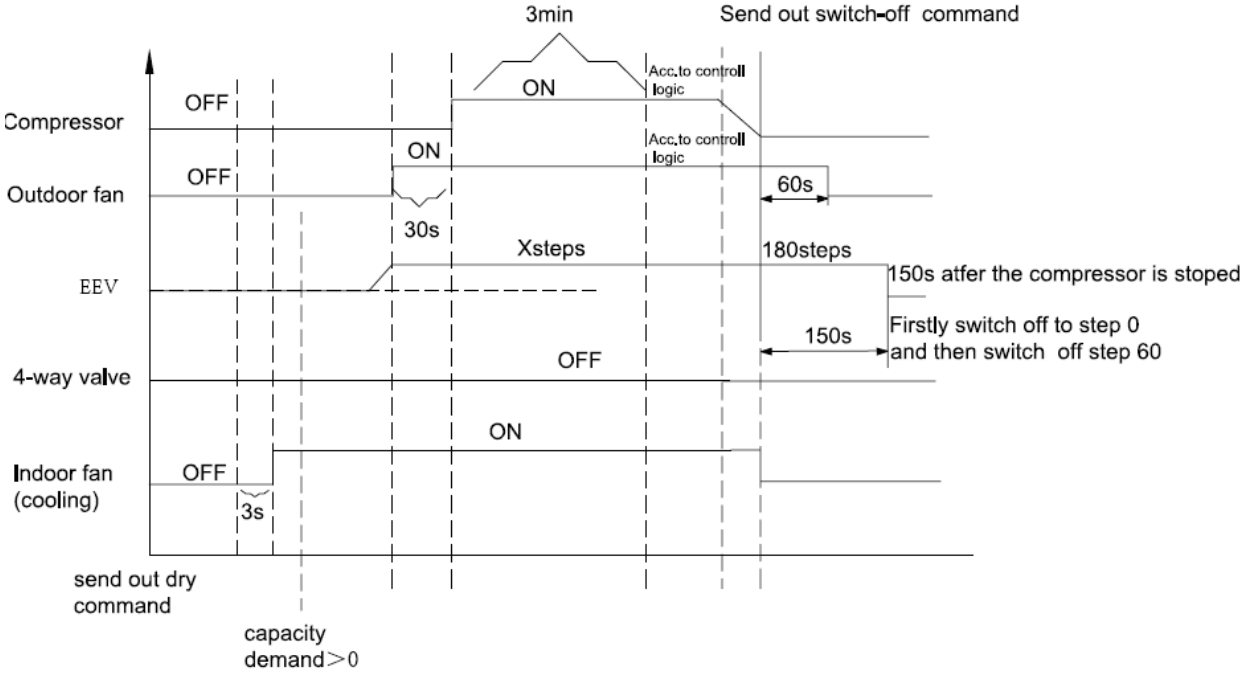
2. When RAT≤20 degree, the unit runs in heating mode
3. When 20 degree <RAT< 26 degree, upon initial startup, the unit will enter auto mode and run in automatic fan mode. If the other mode changes into auto mode, the previous running mode will remain.

11.6 Dry Mode

The dry mode is basically same as cooling mode. The difference is that:

a) The indoor fan is fixed at low speed.

b) Max. Capacity output: A×90%



11.7 Oil return

When the unit is operating in low frequency for long time, the compressor will be forced to decrease frequency for 4 min to make sure the oil, which accumulated into the system, back to compressor.
During the oil return operation, the IDU has no any indication

11.8 Protections

There are 4 protection codes.
Normal (Norm) – unit operate normally.
Stop Rise (SR) – compressor frequency can not be raised but does not have to be decreased.
HzDown – Compressor frequency is reduced by 2Hz/s
Stop Compressor (SC) – Compressor is stopped.

11.8.1 Indoor Coil Defrost Protection

Conditions for Start Controlling
Judge the controlling start with the ICT (Indoor Coil Temperature) in cool and dry mode after compressor is on for 15min to allow the operating frequency limitation and then prevent freezing of the indoor heat exchanger.

Compressor will stop when ICT <= $ICT_{defrost}$ for continuous 3 mins, it can resume running automatically when ICT >=10.

Model	$ICT_{defrost}$
Duct	-2
Floor ceiling	-4
Cassette	-5

11.8.2 High Pressure Protection of Compressor by high pressure switch

When high pressure protection is detected for 3 seconds continuously, the high pressure switch is 4.2Mpa, the unit will stop and report the fault, it can not resume running automatically and display malfunction, it can resume by pressing ON/OFF.

11.8.3 Compressor over Heating Protection

If the discharge temperature rises above a certain level, the operating frequency upper limit is set to keep this temperature from going up further.

Compressor will stop when CTT reaches 130.

The unit can only resume running until the compressor has stopped for 3 minutes and the CTT is lower than 90℃
If the unit stops as such protection for 3 times, it can not resume running automatically and display malfunction, it can resume by pressing ON/OFF.

11.8.4 Compressor over Current Protection

Detect an input current by the CT during the compressor is running, and set the frequency upper limit from such input current. In case of heat pump model, this control is the upper limit control function of the frequency which takes priority of the lower limit of four way valve activating compensation.

Model	Current(A)
YUDE024	45
YUDE030	45
YUDE036	38
YUDE036T	11.5

11.8.5 Outdoor Coil Deicing Protection

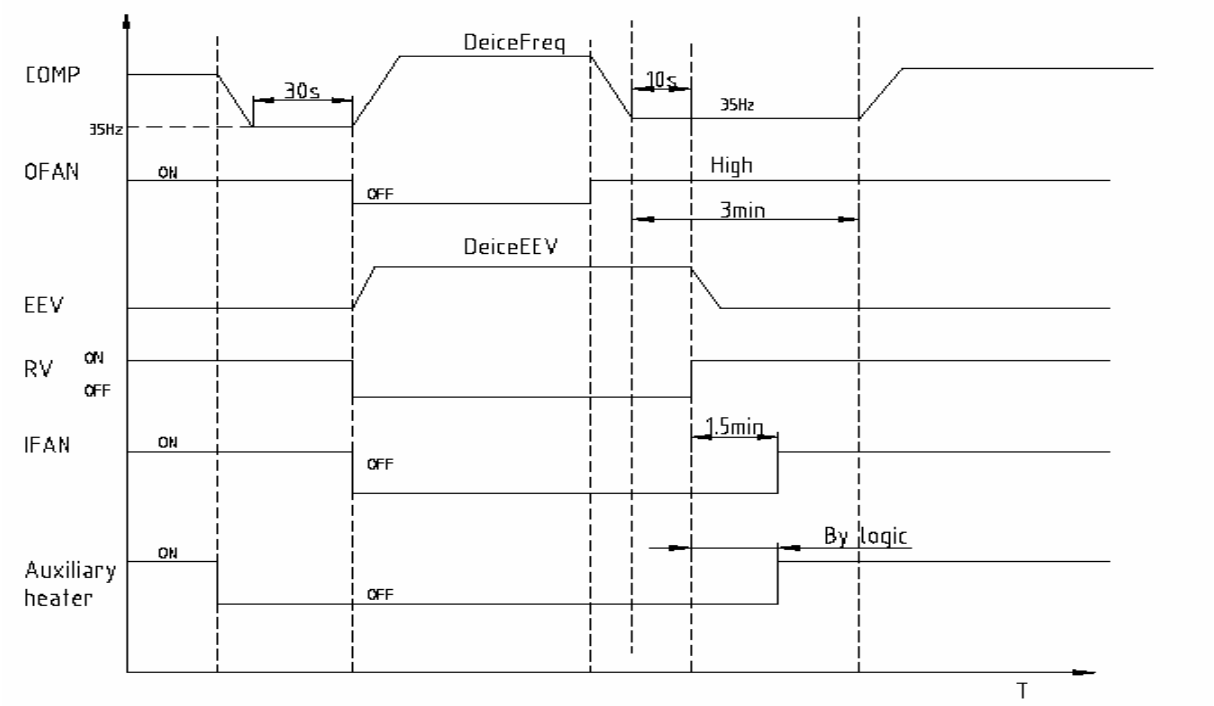
This protection is for Heat Pump Only
This protection is carried out by the cooling cycle (reverse cycle). The defrosting time or outdoor heat exchanger temperature must be more than its setting values when finishing the deicing protection.
In the deicing protection, IFAN is forced OFF.

11.8.5.1 Deicing Starting Conditions

The starting conditions must be made with the outdoor air temperature (OAT) and outdoor coil temperature (OCT). Under the conditions that the system is in heating operation, after the time for defrosting is judged to be satisfied, if the temperature for deicing is satisfied after detections for continuous 3minutes, the deicing operation will start.

Deicing interval time is changed as a function of deicing time. If deicing time is shorter than former deicing time, the deicing interval time will be increased. If deicing time is longer than former deicing time, the deicing interval time will be decreased.

11.8.5.2 Deicing Protection Procedure



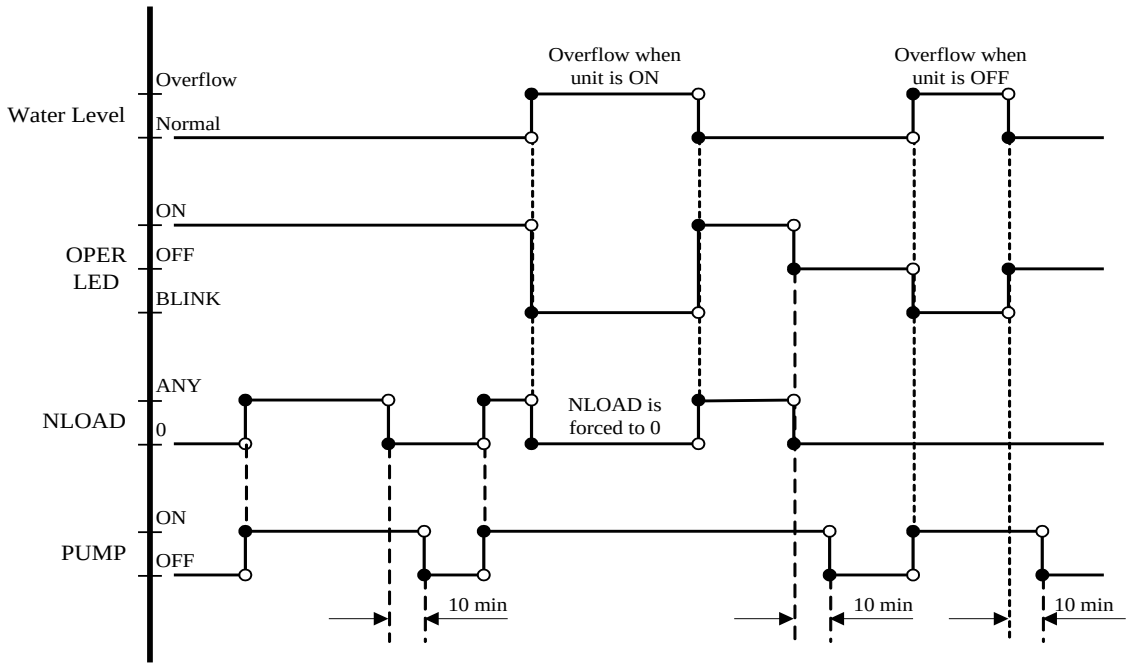
11.8.5.3 Exiting Deicing

The deicing operation can exit when any of the conditions below is satisfied:

1. OCT>=10℃
2. OCT>=6℃ lasts for more than 80s
3. The continuous running time of deicing reaches to 10min.

11.8.6 Condensate Water Over Flow Protection for cassette

Outdoor unit receives “overflow’ signal from the indoor side.
In cooling and dry mode, the pump is always on with the compressor on. And the pump will be on for 10 min after the compressor is off, in heating mode, the pump is off except that the overflow fault occurs.



11.8.7 Communication malfunction

If the ODU does not receive correct signal from indoor unit for 30 seconds continuously, or if the indoor unit does not receive message from outdoor unit for 1 minute, the unit will stop as communication malfunction protection; if communication malfunction resume and compressor has stopped for 3min, the unit will resume running.

11.8.8 IPM module protection

When the compressor starts, if there is over current or control voltage low for IPM module as some abnormal results, IPM will detect module protection signal as the unit is on. Once the module protective signal is detected, stop the unit with module protection immediately. If the module protection is resumed and compressor has stopped for 3min, the unit will be allowed to operate.

If the module protection continuously occurs for 3 times, it should not be resumed automatically, and you should press the ON/OFF button to resume.

11.8.9 Module overheating protection

If the module temperature is higher than 100℃, the unit will stop. If module temperature is lower than 100℃, and compressor has stopped for 3min, the unit will resume operating.
If the unit stops as module overheating protection for 6 times, it can not resume running automatically and display malfunction, it can resume by pressing ON/OFF.

11.8.10 Compressor overload protection

The Over Load Protector is used to detect the compressor's shell temperature. If the compressor temperature rises above a certain level, the compressor OLP will be cut off. Which will happen within 3 seconds continuously, the unit will stop and report fault.
The unit will restart after 3 min if the fault is eliminated. If the unit stops as such protection for 3 times in 30 min, it can not resume running automatically and display malfunction, it can resume by pressing ON/OFF.

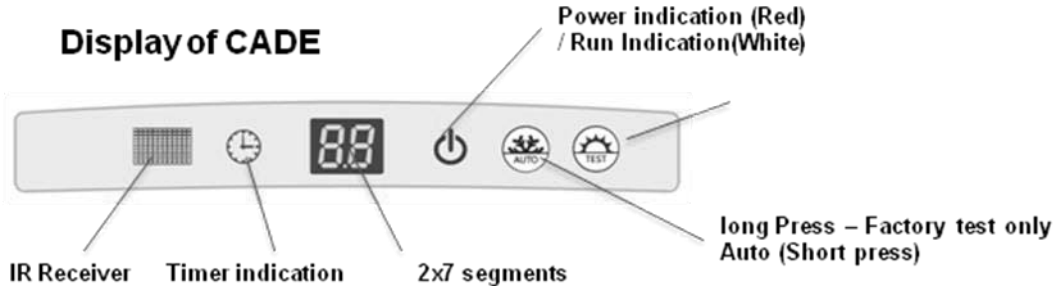
11.9 Operating the Unit from the ON/OFF Button

The ON/OFF button allows to operate the unit in AUTO mode, the microcomputer will monitor the room temperature and select the (COOL, HEAT, FAN) mode automatically, and temperature/Fan speed settings can not be changed.

11.10 Indoor Unit Controllers and Indicators

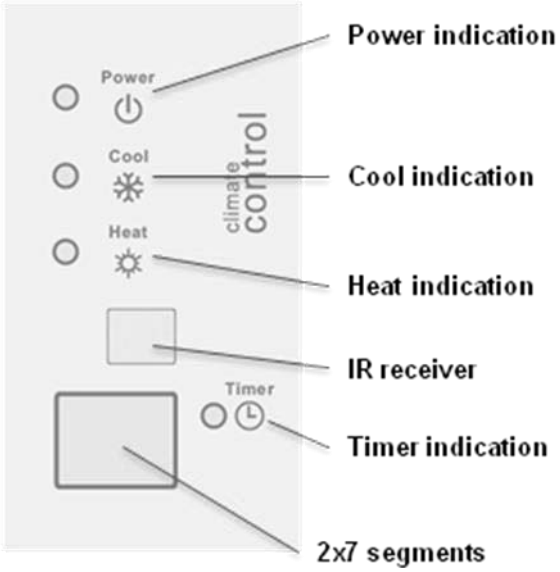
The following is schematic drawing for the display:

CADE:



Power Indication	Lights up when the Air Conditioner is Power ON ,
Run Indication	Lights up when the compressor is ON.
Timer Indication	Lights up when the Timer is set
Auto	Press the Auto button the unit will run auto mode automatically when the unit is off, Press the AUTO button, the air conditioner will stop when it is on
Test	When pressing it, the air conditioner will be forced to operate or stop. Do not press it when air conditioner is in normal operation.
2x7-Segments display	1. In normal situation, the setting temperature is displayed. 2. Shows indoor temperature when receiving the corresponding demand from controller. It resumes displaying setting temperature 5s later 3.Shows the alarm code whenever there is an alarm. (Refer to Diagnostics part)

FADE:



Power indication	Lights up when the unit is connected to power
Timer indication	Lights up when the Timer is set
Cool indication	Lights up when the unit is running in cooling mode
Heat indication	Lights up when the unit is running in heat mode
2x7-Segments display	3. In normal situation, the setting temperature is displayed. 4. Shows indoor temperature when receiving the corresponding demand from controller. It resumes displaying setting temperature 5s later 3.Shows the alarm code whenever there is an alarm. (Refer to Diagnostics part)

11.11 Forced Mode (Compulsory operating function).

Entering into forced mode :

After the unit is powered for 5mins, press the light button on remote controller for 3 times in 3s successively to enter into Freon recovery mode. Fo will be displayed. When Freon recovery mode operated for 25mins, all loads will operate in cooling mode. (The setting fan speed is high fan speed and the setting temperature is 16C)

Exiting forced mode:

Any signal from remote controller or button will exit the forced mode, and then the unit will operate at the current setting command.

Forced mode will also be exited after operating for 25mins and then the unit will be turned off.

11.12 Test Mode (To check the pressure and current).

Perform the test mode with 5 min after unit power on.

Cool mode:
To set the remote control with Cool mode, temperature setting =25C
Press “Lignt” button 5 times in 5 sec to enter into the test mode

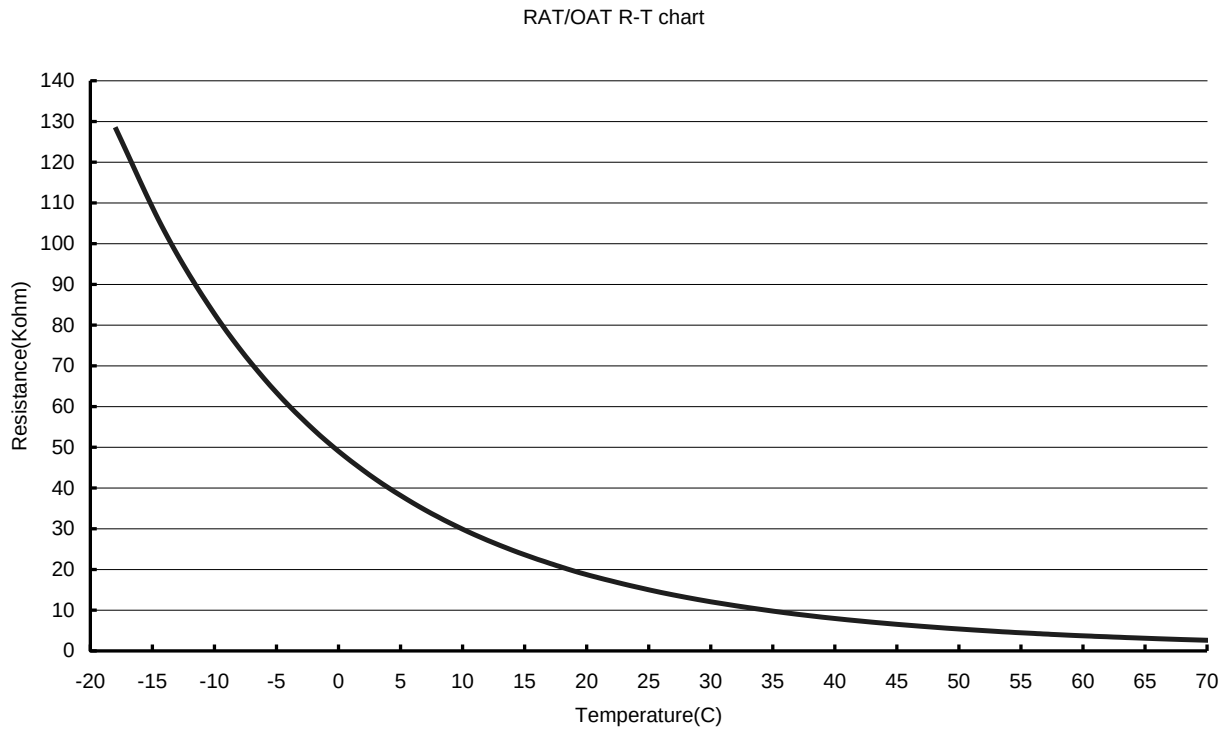
The indoor unit display will show P9

Heat mode:
To set the remote control with Heat mode, temperature setting =29C
Press “Lignt” button 5 times in 5 sec to enter into the test mode

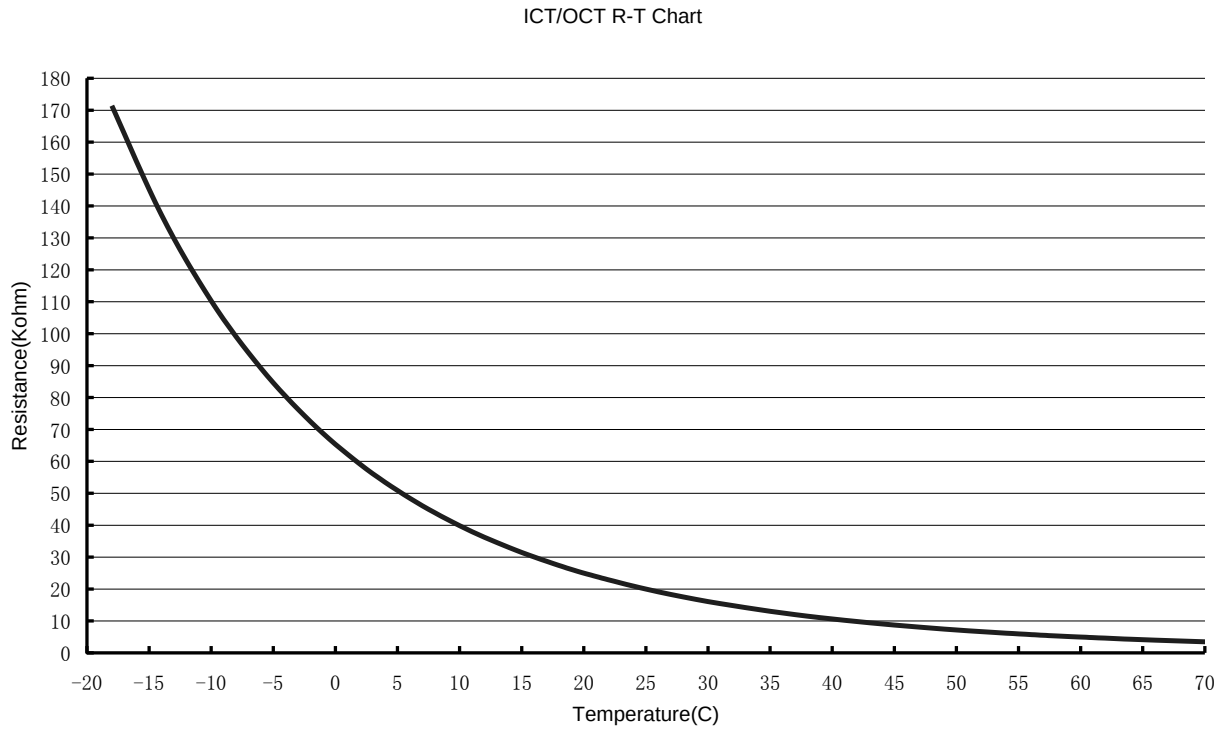
The indoor unit display will show P9

11.13 Characteristics of sensor

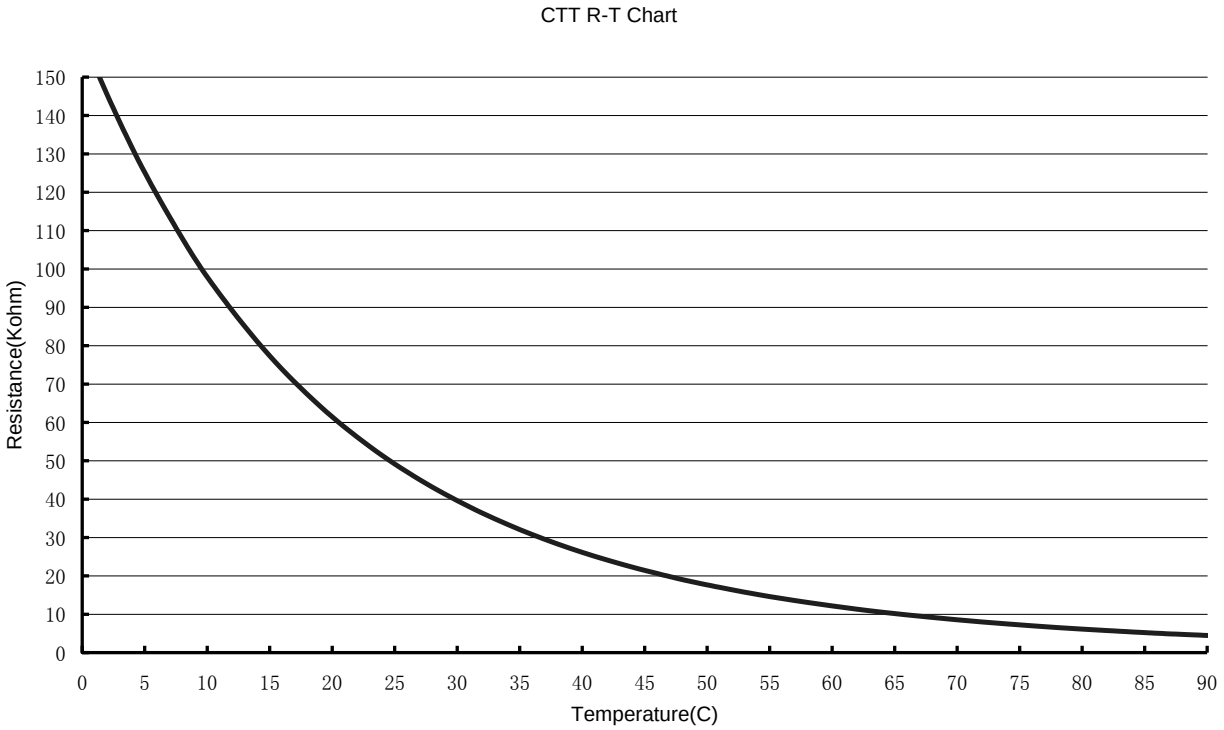
11.13.1 RAT/OAT



11.13.2 ICT/OCT



11.13.3 CTT


CTT R-T Chart
Resistance(Kohm)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
Temperature(C)

12. TROUBLESHOOTING

12.1 ELECTRICAL & CONTROL TROUBLESHOOTING

12.1.1 Precautions before Performing Inspection or Repair

Be cautious during installation and maintenance. Do operation following the regulations to avoid electric shock and casualty or even death due to drop from high attitude.

* **Static maintenance** is the maintenance during de-energization of the air conditioner. For static maintenance, make sure that the unit is de-energized and the plug is disconnected.

***Dynamic maintenance** is the maintenance during energization of the unit. Before dynamic maintenance, check the electricity and ensure that there is ground wire on the site. Check if there is electricity on the housing and connection copper pipe of the air conditioner with voltage tester. After ensure insulation place and the safety, the maintenance can be performed.

Take sufficient care to avoid directly touching any of the circuit parts without first turning off the power. At time such as when the circuit board is to be replaced, place the circuit board assembly in a vertical position. Normally, diagnose troubles according to the trouble diagnosis procedure as described below.(Refer to the check points in servicing written on the wiring diagrams attached to the indoor/outdoor units.)

Precautions when inspecting the control section of the outdoor unit:
A large-capacity electrolytic capacitor is used in the outdoor unit controller (inverter).Therefore, if the power supply is turned off, charge(charging voltage DC280V to 380V)remains and discharging takes a lot of time. After turning off the power source, if touching the charging section before discharging, an electrical shock may be caused.
The outdoor unit can not be started up until the unit is de-energized for 20min

12.1.2 Confirmation

12.1.2.1 Confirmation of Power Supply Confirm that the power breaker operates(ON) normally;

12.1.2.2 Confirmation of Power Voltage Confirm that power voltage is AC220~240V +/- 10% for single phase and AC380-415V+/-10% for three phase. If power voltage is not in this range, the unit may not operate normally.

12.1.3 Judgment by Indoor/Outdoor Unit Diagnostics

Diagnostic from IDU Display:
If the malfunction still exists 4min later after stop of unit due to compressor protection, error code will be directly displayed though indoor display. In other situations, error code can be displayed by pressing LIGHT button 6 times within 4s.

The fault code could be shown in following way:
The Fault codes can be displayed by 2*7 segments (on IDU Display board)
Blinking of IDU LEDs (RUN,COOL,HEAT) can also show the information of fault code.
All fault code could be shown on RCWE
The ODU can only show ODU fault by 2x7 segments on outdoor Main Board.

12.1.3.1 Indoor Unit Diagnostics

12.1.3.2 Indoor Unit Diagnostics and Corrective Actions

12.1.3.3 Outdoor Unit Diagnostics

Indoor indicators		Failure	Possible Reasons/Corrective actions
IDU 2*7segments / RCWE	ODU 2x7 segments		
E0	-	Water pump failure	1. Connection of pump is loosen 2. Pump is damaged
E1	E1	High-pressure switch protection	1. Refrigerant was superabundant 2. Poor heat exchange (including blockage and bad radiating environment) 3. Too high ambient temperature
E2	-	Defrost protection	1. Poor air-return in indoor unit 2. Fan speed is abnormal 3. Evaporator is dirty. 4. The ambient temperature is too low
E3	E3	Low pressure switch protection	1. Refrigerant leakage 2. Poor heat exchange (including blockage and bad radiating environment) 3. EEV connection problem or damage
E4	E4	Compressor over heating protection	1. EEV connection problem or damage 2. Refrigerant leakage 3. Poor heat exchange
E6	E6	Communication malfunction	1. Wiring mistakes 2. IDU or ODU PCB problem
E8		Malfunction of indoor fan motor	1. Bad contact of motor feedback terminal and connection 2. Fan motor is blocked. 3. Motor malfunction 4. Malfunction of main board rev detecting circuit.
E9	-	Water overflow protection	1. Pump is damaged 2. The drain pipe is block
EE	EE	Malfunction of outdoor main control memory chip	
F0	-	RAT failure	1. Senor was broken or damaged 2. PCB temperature detection circuit has problem
F1	-	ICT failure	
F2	F2	OCT failure	
F3	F3	OAT failure	

F4	F4	CTT failure	
F5	-	RCT failure	
P0	P0	IPM reset	
P5	P5	Compressor phase current detection problem	Phase current detection circuit for compressor has problem.
P7	P7	HST failure	PCB is damaged
P8	P8	Heat sink overheating protection	1. Insufficient grease on heatsink or poor connection of heatsink to PCB 2. Outdoor PCB problem.
P9	P9	AC contactor protection	
Pc	Pc	Current sensor failure	PCB is damaged
Pd	Pd	Sensor connection protection	
PE	PE	Temperature shift protection	
PH	PH	DC over voltage protection	1. AC power supply is higher than 265V 2. Outdoor PCB circuit malfunction
PL	PL	DC under voltage protection	1. AC power supply voltage is less than 150VAC 2. Outdoor PCB circuit malfunction
H3	H3	Compressor over load protection	1. Connection of compressor OLP is loosen (the resistance for this terminal should be less than 1ohm) 2. EEV connection problem or damaged/Capillary problem 3. Refrigerant leakage
H4		Overload protection	1. Too high ambient temperature outdoor side (cooling mode) or indoor side (Heating mode) 2. Poor heat exchange (including blockage and bad radiating environment)
H5	H5	IPM protection	1. Abnormal power input voltage. 2. Compressor wiring mistake. 3. Liquid and gas valve are not open. 4. EEV damaged or not proper working 5. Poor heat exchange. 6. Over charged system.
H6	H6	Outdoor DC Fan error	1. Bad contact of DC motor feedback terminal. 2. Bad contact of DC motor control end. 3. Fan motor is blocked. 4. Motor malfunction 5. Malfunction of main board rev detecting circuit.
H7	H7	Desynchronizing of compressor	1. Abnormal power input voltage. 2. Compressor wiring mistake. 3. Liquid and gas valve are not open. 4. EEV damaged or not proper working 5. Poor heat exchange. 6. Over charged system.
Hc	Hc	PFC protection	1. PFC module assembly problem. 2. Poor heat exchange of Heatsink 3. PFC reactor problem. 4. Abnormal power voltage 5. PFC circuit problem on PCB
Lc	Lc	Compressor startup failure	1. Compressor wiring mistake 2. Over charged system 3. System not balanced before compressor starting 4. Compressor problem
Ld	Ld	Lack phase protection of compressor	1. Phase current detection circuit for compressor has problem. 2. Comp wiring mistake
LF	LF	Compressor over speed	1. Compressor wiring mistake 2. The compressor wire go cross the relative current sensor 3. IPM damage
U7	U7	RV is abnormal	1. Supply voltage is lower than AC175V; 2. Wiring terminal RV is loosened or broken; 3. RV is damaged.

			1.
LP	LP	Mismatch between IDU and ODU	1. Wiring mistakes 2. IDU or ODU PCB problem 3. IDU jumper setting is wrong
PA	PA	AC over current protection	1. Supply voltage is unstable 2. Supply voltage is too low and load is too high
PF	PF	Driver board ambient temperature sensor failure	
PP	PP	AC under voltage/ AC over voltage	1. Supply voltage is unstable 2. PCB is damaged
PU	PU	Charging malfunction of capacitor	1. Reactor open 2. Charging relay or other components damaged on PCB.

12.1.4 Checking the refrigeration system

Checking system pressures and other thermodynamic measures should be done when system is in Test Mode (in Test mode, system operates in fixed settings). The performance curves given in this manual are given for unit performance in test mode when high indoor fan speed is selected.
Entering test mode please refer to section 11- Control system.

12.2 Simple procedures for checking the Main Parts

12.2.1 Checking Mains Voltage.

Confirm that the Mains voltage is between 198 and 264 VAC. If Mains voltage is out of this range, abnormal operation of the system is expected. If in range check the Power (Circuit) Breaker and look for broken or loosed cable lugs or wiring mistake(s).

12.2.2 Checking Power Input.

If Indoor unit power LED is unlighted, power down the system and check the fuse of the Indoor unit. If the fuse is OK replace the Indoor unit controller. If the fuse has blown, replace the fuse and power up again.
Checking Power Input procedure for the Outdoor unit is the same as with the Indoor unit.

12.2.3 Checking the Outdoor Fan Motor.

Check the output voltage between two wires (RED and BLACK) of connector Controller DC-MOTOR, normal voltage is 310VDC.

12.2.4 Checking the Compressor.

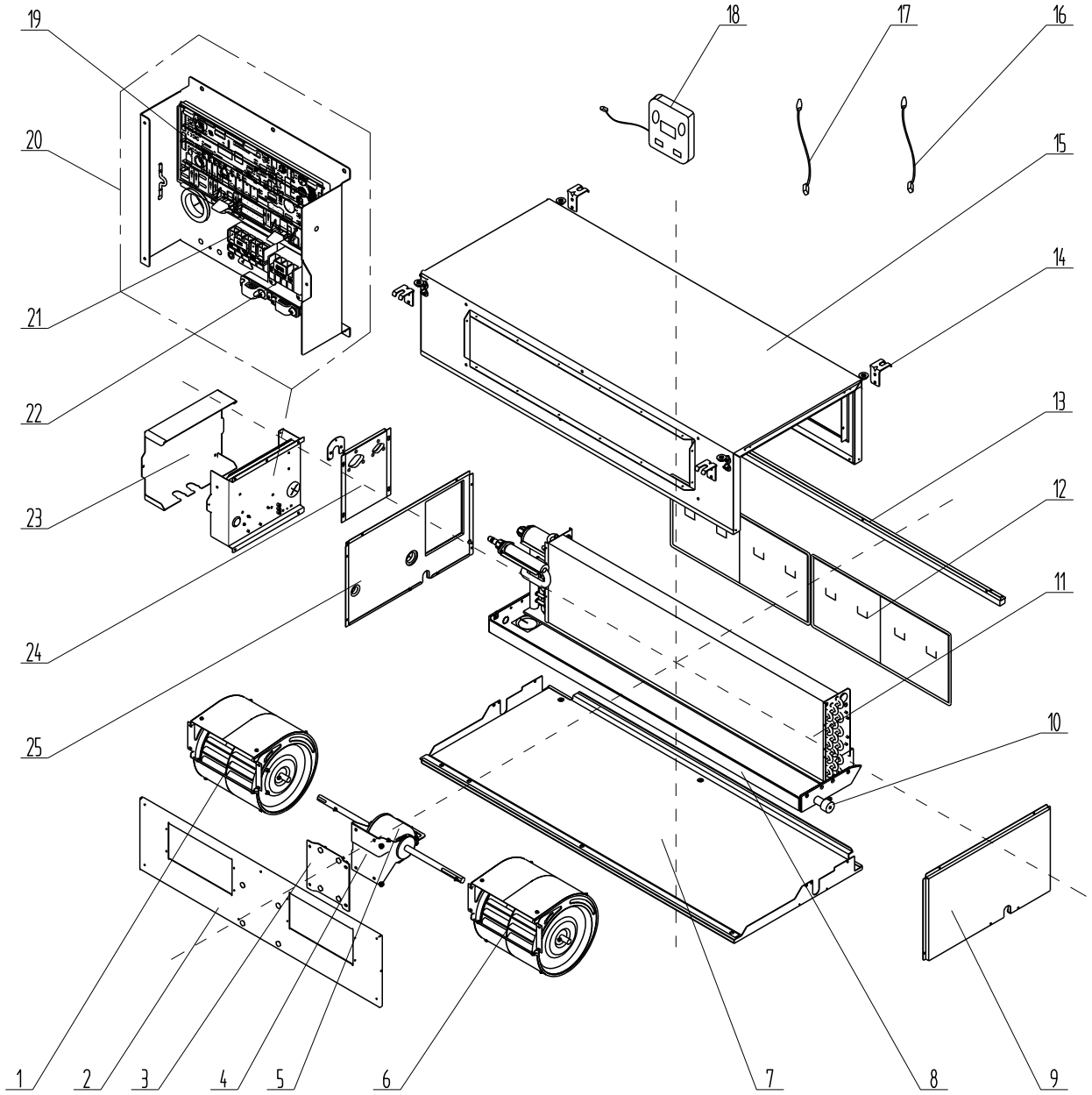
The compressor is brushless permanence magnetic DC motor. Three coil resistance is same. Check the resistance between three poles. The normal value should be below 0.7 ohm.

12.2.5 Checking the Reverse Valve (RV).

Running in heating mode, check the voltage between two pins of reverse valve connector, normal voltage is 220~240VAC.

13. EXPLODED VIEWS AND SPARE PART LISTS

13.1 Exploded view of Indoor unit: AWSI-DBDE024/030-N11



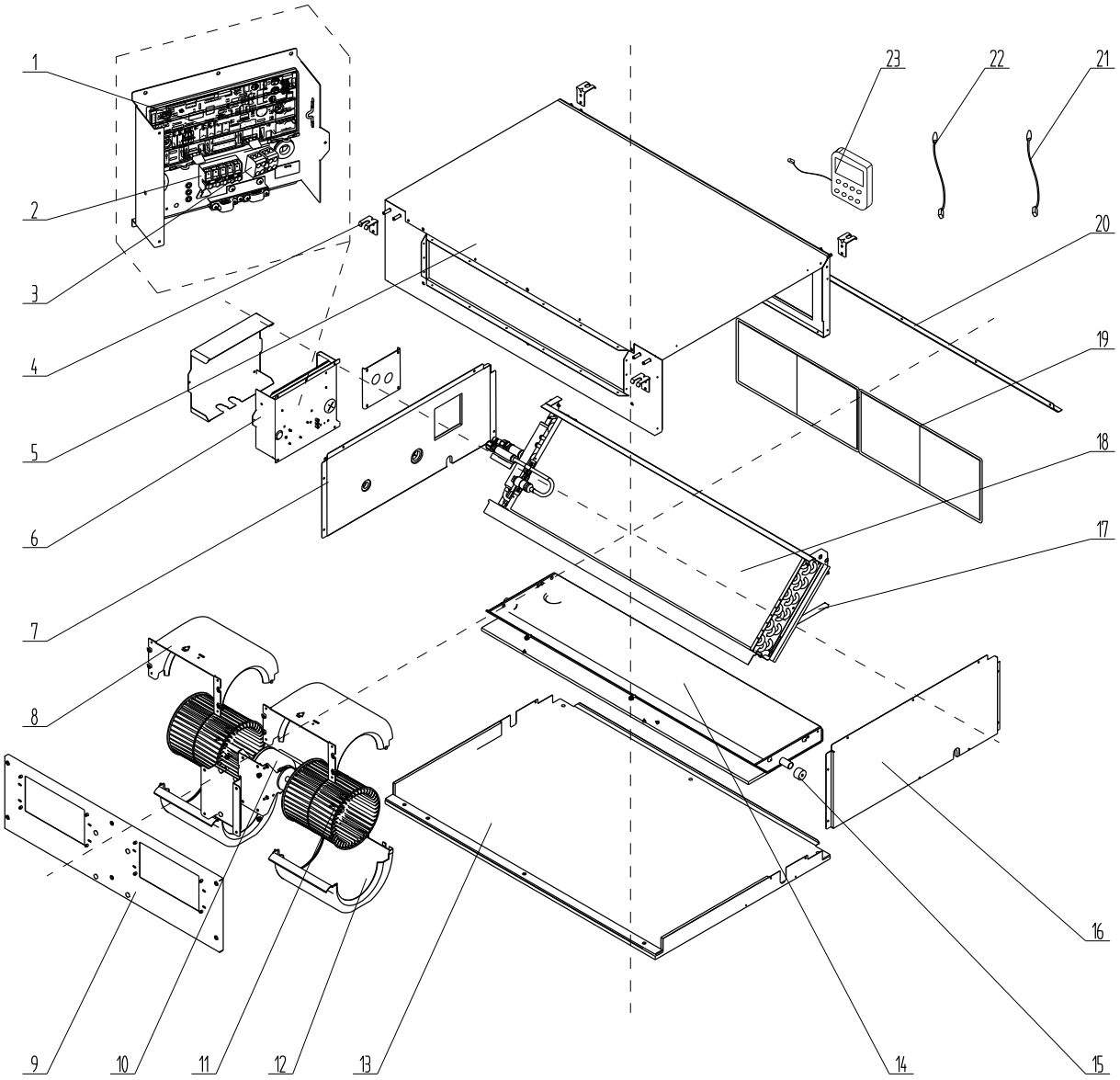
13.2 Spare part list of Indoor Unit: AWSI-DBDE024-N11

NO.	Part Code	Part Description	qty
1	15012454	Motor(left) SYP-160/200J	1
2	01325200039	Blower Mounting Plate Sub-Assy	1
3	01805200164	Support Sub-assy	1
4	01804100140	Supporter	1
5	15705200006	Brushless DC Motor	1
6	15012458	Motor(right) SYP-160/200J	1
7	01265304	Bottom Cover	1
8	01285317	Water Tray Foam	1
9	01314155	Left Side Plate	1
10	76712455	Choke Plug of Drain Pipe	2
11	01025200050	Evaporator Assy	1
12	11125303	Filter Sub-assy	2
13	02285301	Filter runner Assy	1
14	02112446	Hook	4
15	01265226	Upper Cover Plate Assy	1
16	3900012128	Tube sensor	1
17	3900012123	Ambient Temperature Sensor	1
18	30294000007_K93693	RCWE wired Remote Control	1
19	30224000030	Main Board	1
20	01395200212	Electric Box Assy	1
21	4201025301	Terminal Board	1
22	42010194	Terminal Board	1
23	01425200043	Electric Box Cover	1
24	01265200098	Cover Plate Sub-Assy	1
25	01315200057	Right Side Plate Sub-Assy	1
	30510460_K93693	Remote Controller	1

13.3 Spare part list of Indoor Unit: AWSI-DBDE030-N11

NO.	Part Code	Part Description	qty
1	15012454	Motor(left) SYP-160/200J	1
2	01325200039	Blower Mounting Plate Sub-Assy	1
3	01805200164	Support Sub-assy	1
4	01804100140	Supporter	1
5	15705200006	Brushless DC Motor	1
6	15012458	Motor(right) SYP-160/200J	1
7	01265304	Bottom Cover	1
8	01285317	Water Tray Foam	1
9	01314155	Left Side Plate	1
10	76712455	Choke Plug of Drain Pipe	2
11	01025200050	Evaporator Assy	1
12	11125303	Filter Sub-assy	2
13	02285301	Filter runner Assy	1
14	02112446	Hook	4
15	01265226	Upper Cover Plate Assy	1
16	3900012128	Tube sensor	1
17	3900012123	Ambient Temperature Sensor	1
18	30294000007_K93693	RCWE wired Remote Control	1
19	30224000030	Main Board	1
20	01395200212	Electric Box Assy	1
21	42010194	Terminal Board	1
22	4201025301	Terminal Board	1
23	01425200043	Electric Box Cover	1
24	01265200098	Cover Plate Sub-Assy	1
25	01315200057	Right Side Plate Sub-Assy	1
	30510460_K93693	Remote Controller	1

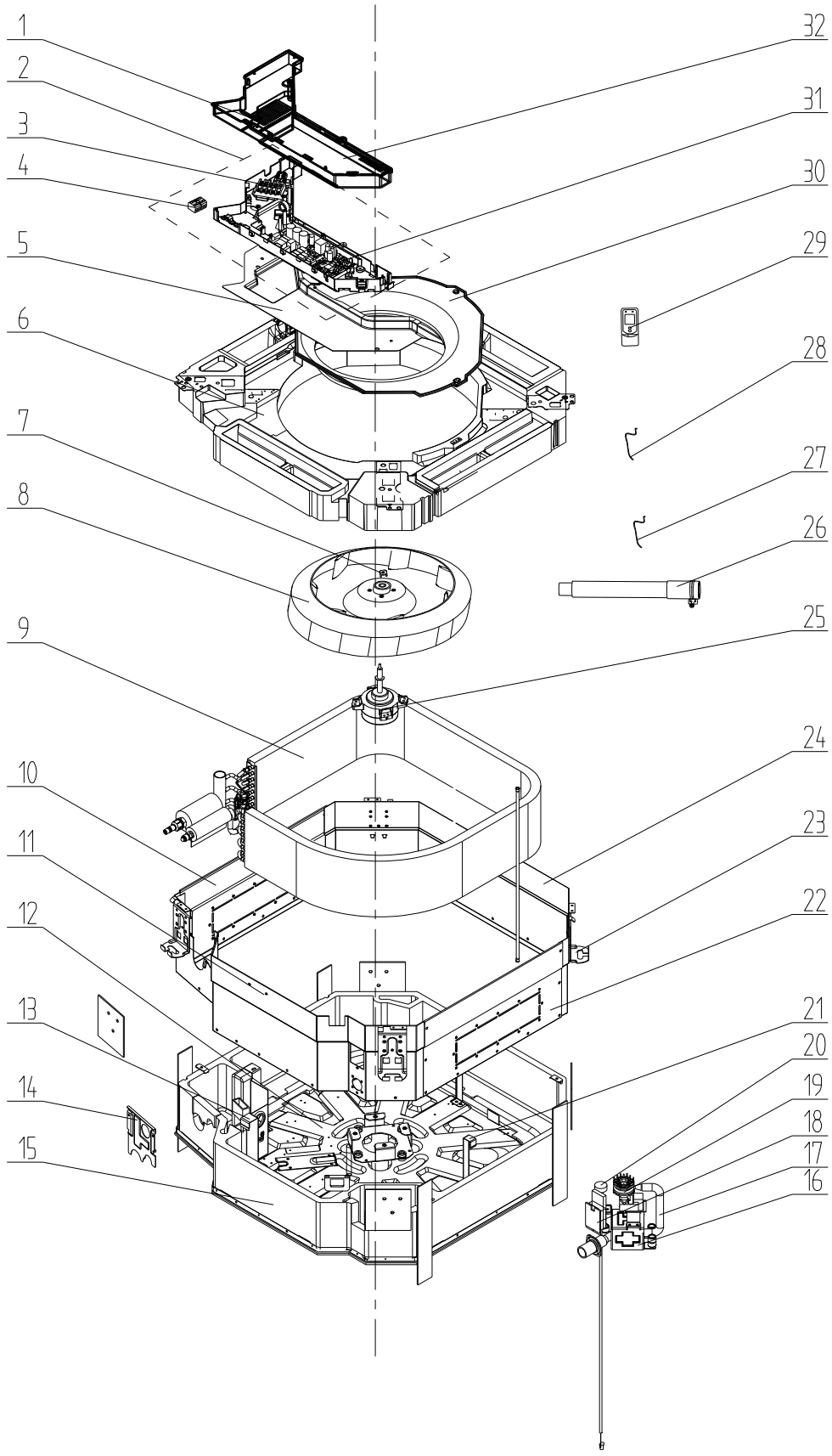
13.4 Exploded view of Indoor unit: AWSI-DBDE036-N11



13.5 Spare part list of Indoor Unit: AWSI-DBDE036-N11

NO.	Part Code	Part Description	qty
1	30224000030	Main Board	1
2	4201025301	Terminal Board	1
3	42010194	Terminal Board	1
4	02112466	Hook	4
5	01265200086	Top Cover Board Assy	1
6	01395200212	Electric Box Assy	1
7	01315200100	Right Side Plate Sub-Assy	1
8	26904100051	Volute Casing (Upper)	2
9	01325200044	Blower Mounting Plate Sub-Assy	1
10	15709400006	Brushless DC Motor	1
11	10424100001	Centrifugal Fan Blade	2
12	26904100052	Volute Casing (Lower)	2
13	15265301	Bottom Cover	1
14	01285323	Water Tray Components	1
15	76712455	Choke Plug of Drain Pipe	2
16	01315306	Left Side Plate	1
17	018953022	Evaporator Support Plate	1
18	01025200052	Evaporator Assy	1
19	111253031	Filter Sub-Assy	2
20	01375301	Side Plate of Air intake	1
21	390001921G	Temperature Sensor	1
22	3900012123	Ambient Temperature Sensor	1
23	30294000007_K93693	RCWE wired Remote Control	1
	30510460_K93693	Remote Controller	1

13.6 Exploded view of Indoor unit:AWSI-CADE024/030/036-N11



13.7 Spare part list of Indoor Unit: AWSI-CADE024-N11

NO.	Part Code	Part Description	qty
1	20122054	Electric Box Cover Sub-Assy1	1
2	01399400057	Electric Box Assy	1
3	4201025801	Terminal Board	1
4	4201025301	Terminal Board	1
5	01412721	Electric Box Base Plate	1
6	20182701	Water Tray Assy	1
7	10312701	Fan Fixer	1
8	10312705	Centifugal Fan	1
9	01029400045	Evaporator Assy	1
10	01302715	Left Side Plate Assy	1
11	01302718	Front Side Plate	1
12	01222701	Base Plate Assy	1
13	01074042	Connection Sheet Assy	1
14	01382715	Tube Exit Plate Assy	1
15	52012722	Bottom Foam Assy	1
16	01329416	Water Pump Mounting Rack	1
17	05230026	Drain Pipe for Water Pump	1
18	01252713	Pump Backup Cover Plate Assy	1
19	43130324	Water Pump	1
20	45018012	Water Level Switch	1
21	01072703	Evaporator of Fixed Mount	2
22	01302716	Right Side Plate	1
23	01332701	Major Mounting Plate	4
24	01302714	Rear Side Plate	1
25	15709400004	Brushless DC Motor	1
26	05232702	Drain Hose Assy	1
27	390001912	Room Sensor	1
28	390001921G	Temperature Sensor	1
29	30510460_K93693	Remote Controller	1
30	10372701	Diversion Circle	1
31	30224000028	Main Board	1
32	20122055	Electric Box Cover Sub-Assy2	1
	30294000007_K93693	RCWE wired Remote Control	1

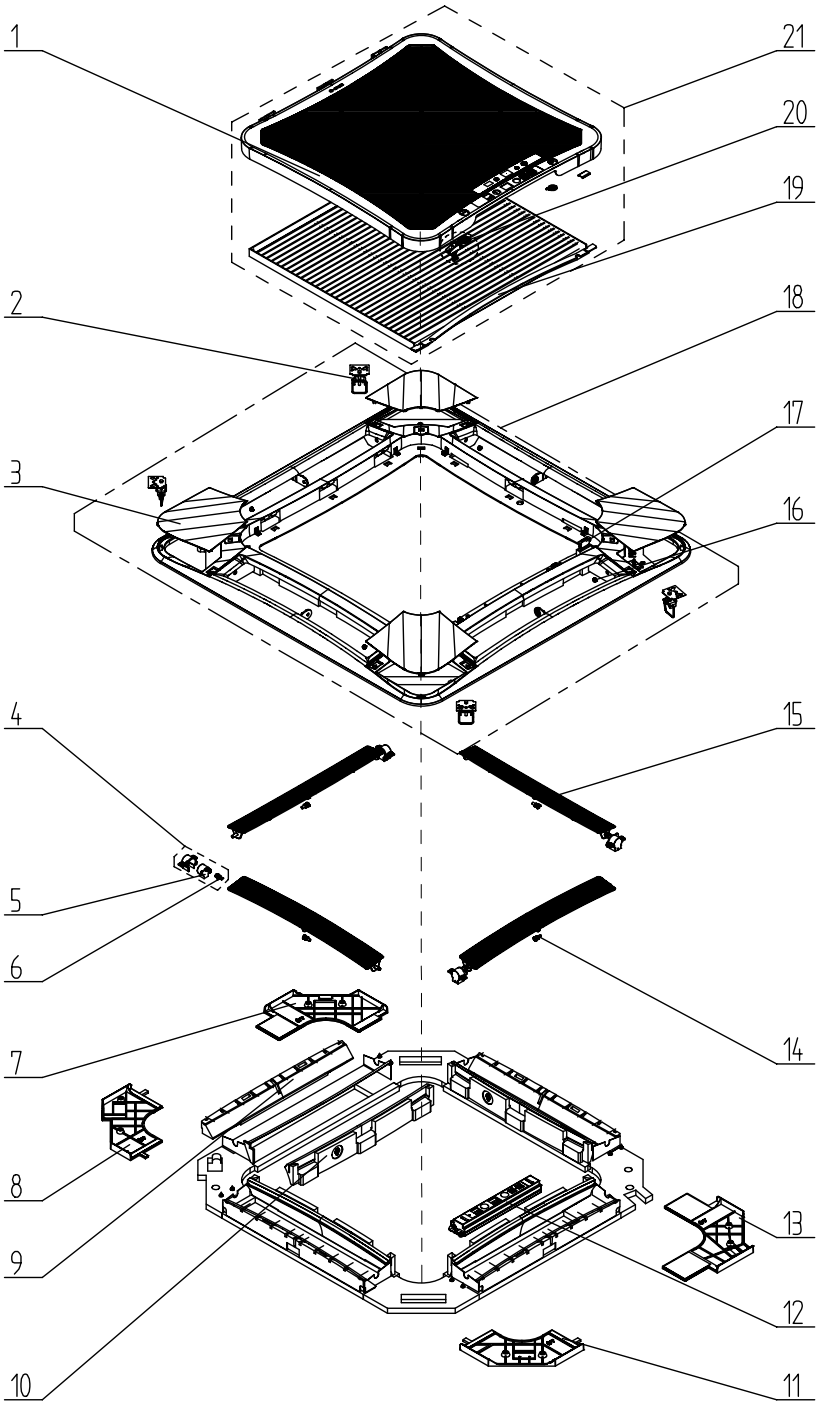
13.8 Spare part list of Indoor Unit: AWSI-CADE030-N11

NO.	Part Code	Part Description	qty
1	20122054	Electric Box Cover Sub-Assy1	1
2	01399400057	Electric Box Assy	1
3	4201025801	Terminal Board	1
4	4201025301	Terminal Board	1
5	01412721	Electric Box Base Plate	1
6	20182701	Water Tray Assy	1
7	10312701	Fan Fixer	1
8	10310101	Centrifugal Fan	1
9	01029400042	Evaporator Assy	1
10	01302711	Left Side Plate Assy	1
11	01302713	Front Side Plate	1
12	01222701	Base Plate Assy	1
13	01072732	Evaporator Linkage	1
14	01382715	Tube Exit Plate Assy	1
15	52012721	Bottom Foam Assy	1
16	01332721	Water Pump Mounting Rack	1
17	05230026	Drain Pipe for Water Pump	1
18	01252713	Pump Backup Cover Plate Assy	1
19	43130324	Water Pump	1
20	45018012	Water Level Switch	1
21	01072707	Evaporator of Fixed Mount	2
22	01302712	Right Side Plate Assy	1
23	01332701	Major Mounting Plate	4
24	01302709	Rear Side Plate	1
25	15709400003	Brushless DC Motor	1
26	05232702	Drain Hose Assy	1
27	390001912	Room Sensor	1
28	390001921G	Temperature Sensor	1
29	30510460_K93693	Remote Controller	1
30	10372722	Diversion Circle	1
31	30224000028	Main Board	1
32	20122055	Electric Box Cover Sub-Assy2	1
	30294000007_K93693	RCWE wired Remote Control	1

13.9 Spare part list of Indoor Unit: AWSI-CADE036-N11

NO.	Part Code	Part Description	qty
1	20122054	Electric Box Cover Sub-Assy1	1
2	01399400057	Electric Box Assy	1
3	4201025801	Terminal Board	1
4	4201025301	Terminal Board	1
5	01412721	Electric Box Base Plate	1
6	20182701	Water Tray Assy	1
7	10312701	Fan Fixer	1
8	10310101	Centrifugal Fan	1
9	01029400042	Evaporator Assy	1
10	01302711	Left Side Plate Assy	1
11	01302713	Front Side Plate	1
12	01222701	Base Plate Assy	1
13	none	Connected Board Assy of Evaporator	0
14	01382715	Tube Exit Plate Assy	1
15	52012721	Bottom Foam Assy	1
16	01332721	Water Pump Mounting Rack	1
17	05230026	Drain Pipe for Water Pump	1
18	01252713	Pump Backup Cover Plate Assy	1
19	43130324	Water Pump	1
20	45018012	Water Level Switch	1
21	01072707	Evaporator of Fixed Mount	2
22	01302712	Right Side Plate Assy	1
23	01332701	Major Mounting Plate	4
24	01302709	Rear Side Plate	1
25	15709400003	Brushless DC Motor	1
26	05232702	Drain Hose Assy	1
27	390001912	Room Sensor	1
28	390001921G	Temperature Sensor	1
29	30510460_K93693	Remote Controller	1
30	10372722	Diversion Circle	1
31	30224000028	Main Board	1
32	20122055	Electric Box Cover Sub-Assy2	1
	30294000007_K93693	RCWE wired Remote Control	1

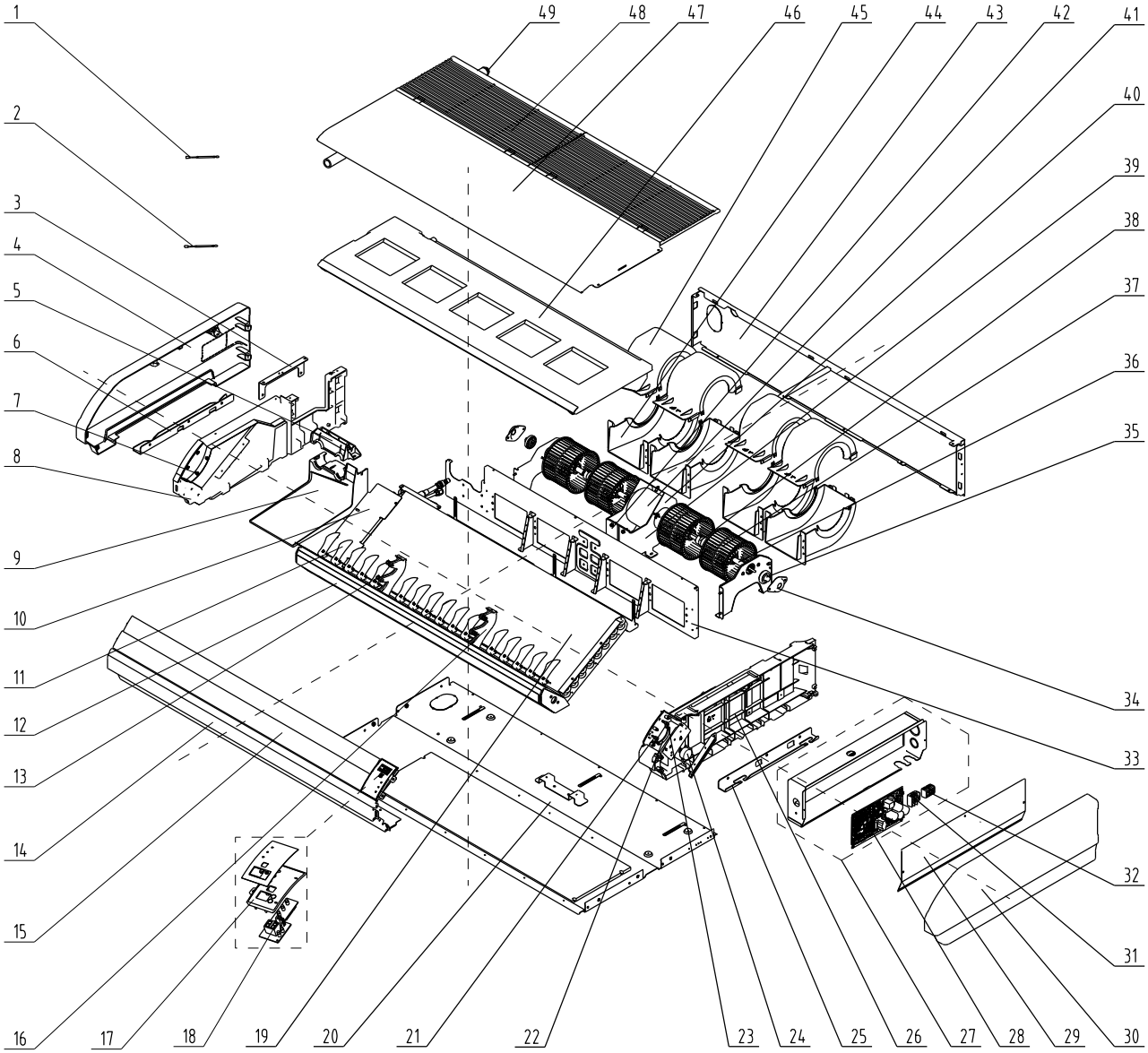
13.10 Exploded view of cassette panel: AWAC-95*95 CADE 24/36



13.11 Spare part list of Indoor Unit: AWSI-CADE036-N11

NO.	Part Code	Part Description	qty
1	26909466	Front Grill	1
2	70810101	Hanging Ring	4
3	01269410	Outer Corner Cover Sub-Assy	4
4	15409407	Louver Motor Sub-assy	4
5	15729401	Step Motor	1
6	10582070	Crank	1
7	01269411	Inner Corner Cover Sub-Assy IV	1
8	01269412	Inner Corner Cover Sub-Assy III	1
9	52069409	Air Outle Foamt 1	4
10	52069410	Air Outle Foamt 2	4
11	01269413	Inner Corner Cover Sub-Assy III	1
12	none	Display Board	0
13	01269414	Inner Corner Cover Sub-Assy I	1
14	10542036	Axile Bush	4
15	10619406	Guide Louver	4
16	10512037	Left Axile Bush	4
17	70842705	Magnet Sub-assy	1
18	01549401	Front Panel Assy	1
19	11729405	Filter Sub-Assy	1
20	02209402	Clamp Sub-Assy	1
21	01579400004_K90750	Front Grill Assy	1

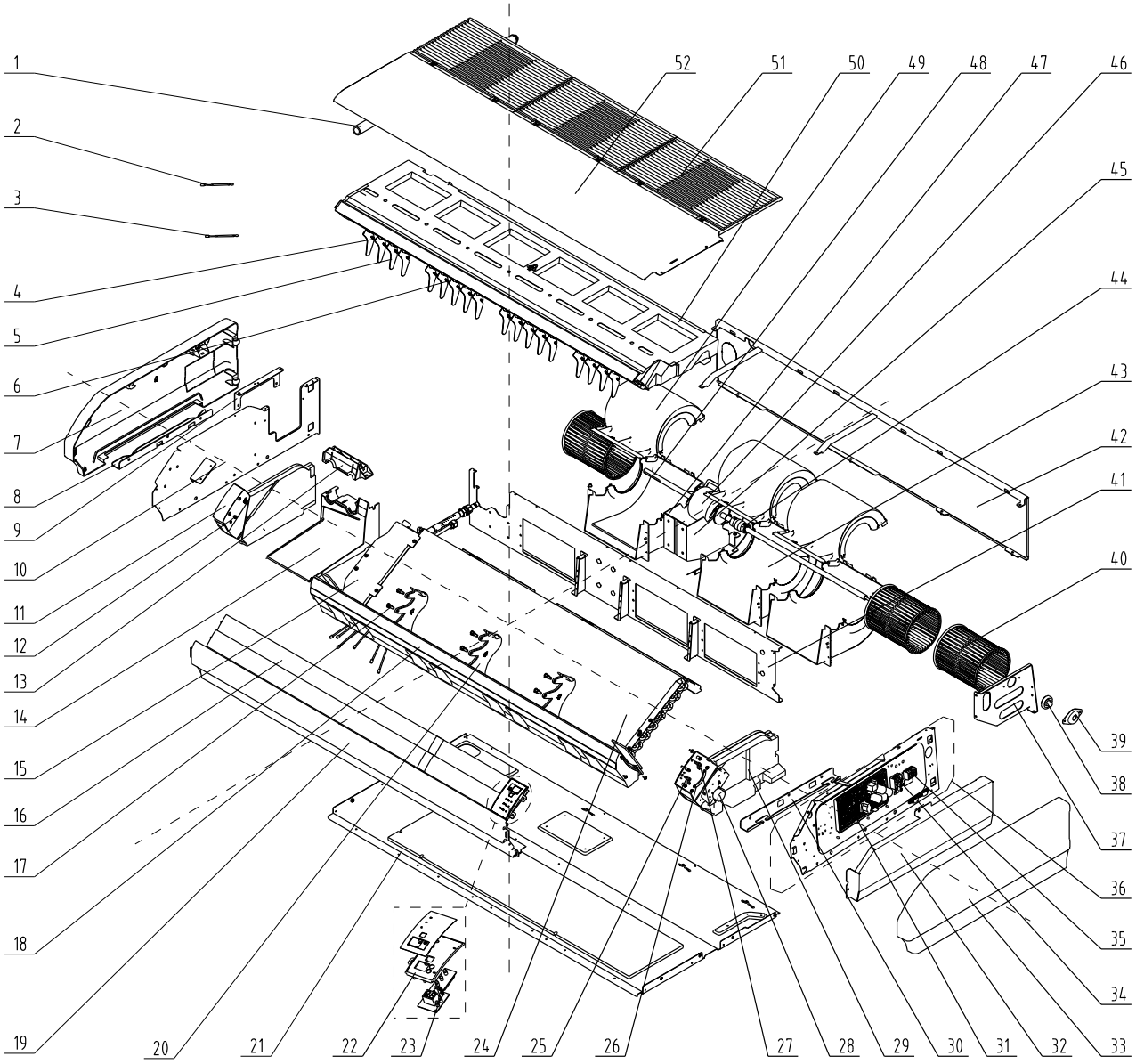
13.12 Exploded view of Indoor unit:AWSI-FADE024-N11



13.13 Spare part list of Indoor unit:AWSI-FADE024-N11

NO.	Part Code	Part Description	qty
1	390001923	Tube sensor	1
2	39000191	Room Sensor	1
3	02229406	Connection Board	1
4	26909444	Right Cover Plate	1
5	26909442	Fixed Plate	1
6	01809402	Right Pensile Bracket	1
7	10542704	Axile Bush	2
8	01319429	Right Side Plate Sub-Assy	1
9	02284106P	Water Releasing Flume	1
10	01349421	Connected Board (Evaporator)	1
11	10619404	Air Louver	16
12	0180941601	Guide Louver Support	1
13	26909430	Rotating Shaft	4
14	01349414P	Front Connection Board	1
15	10619403	Guide Louver	2
16	26909449	Supporter	2
17	26909426R	Fixed Mount	1
18	30294000009	Display Board	1
19	01029400046	Evaporator Assy	1
20	01319400008	Rear Side Plate Assy	1
21	26909413	Rotating Shaft	1
22	26909411	Connecting Rod	1
23	26909412	Rotating Shaft	1
24	1521240206	Step Motor	1
25	01809401	Left Pensile Bracket	1
26	01319428	Left Side Plate Sub-Assy	1
27	01399400071	Electric Box Assy	1
28	30224000029	Main Board	1
29	01429420	Electric Box Cover	1
30	26909443	Left Cover Plate	1
31	42010178	Terminal Board	1
32	4201025301	Terminal Board	1
33	01249416	Mid-clapboard sub-assy	1
34	01792408	Support Of Motor Bearing	2
35	76512404	O-Gasket of Bearing	2
36	73018000037	Rotary Axis Sub-Assy	2
37	10425200	Centrifugal fan	4
38	73018731	Joint Slack	2
39	01809400024	Supporter	1
40	70818000001	Clamping Band Assembly	1
41	15704100001	DC brushless Motor	1
42	01809400023	Supporter	1
43	01349422	Rear connect plate	1
44	26905205	Front volute casing	4
45	26905206	Rear volute casing	4
46	01289404	Water Tray Assy	1
47	01269409	Top Cover Board Sub-assy	1
48	01579403	Front Grill sub-assy	2
49	05235434	Drainage Pipe Sub-assy	1
	30510460_K93693	Remote Controller	1
	30294000007_K93693	RCWE wired Remote Control	1

13.14 Exploded view of Indoor unit:AWSI-FADE030/036-N11

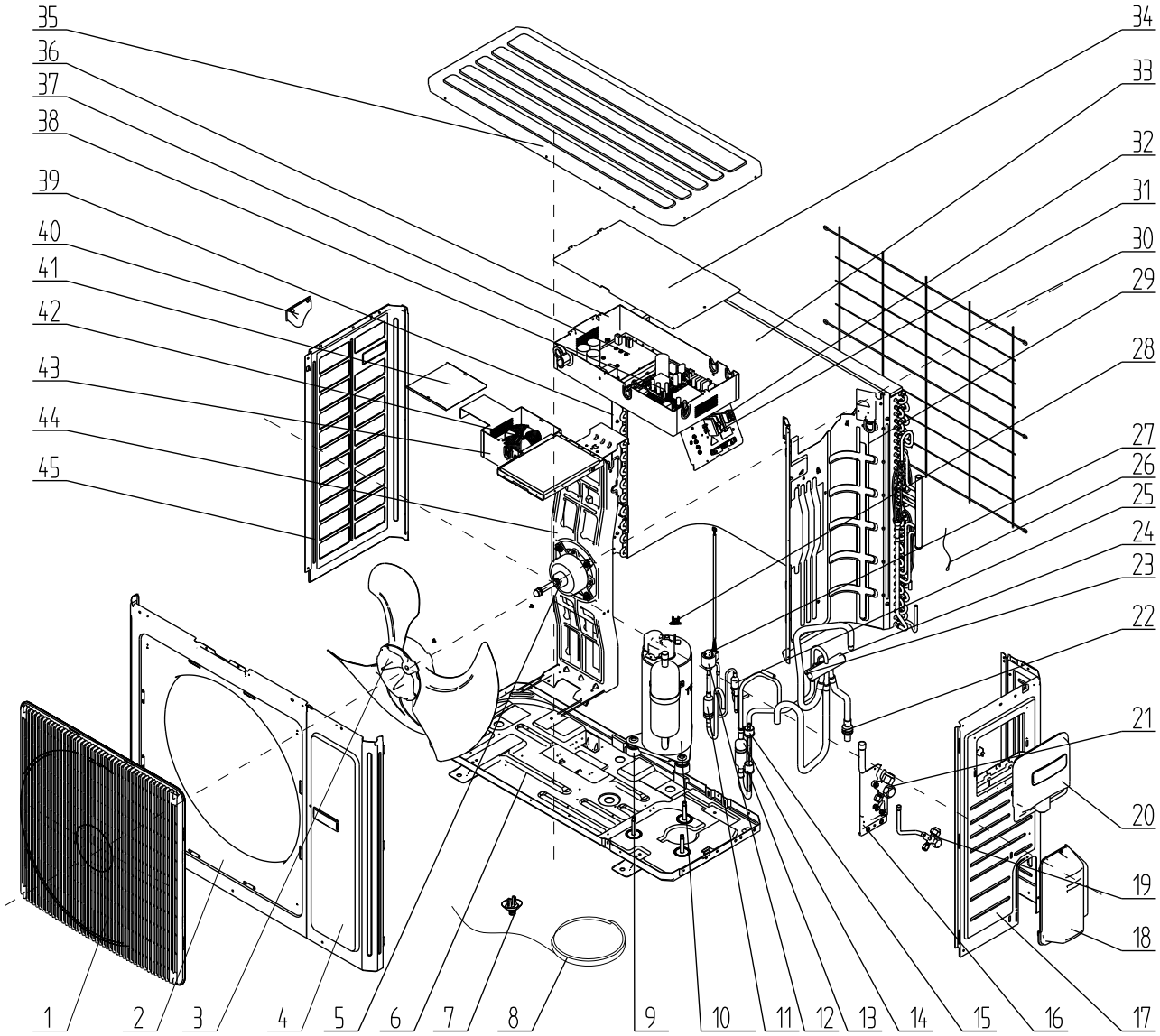


13.15 Spare part list of Indoor unit:AWSI-FADE030-N11

NO.	Part Code	Part Description	qty
1	05235434	Drainage Pipe Sub-assy	1
2	390001923	Tube sensor	1
3	39000191	Room Sensor	1
4	10582008	Swing Lever	2
5	26909418	Air Louver	18
6	10582009	Swing Lever	2
7	26909422	Right Cover	1
8	01809402	Right Pensile Bracket	1
9	02229406	Connection Board	1
10	01319408	Right Side Plate Sub-Assy	1
11	12509425	Right foam assy	1
12	10542704	Axile Bush	2
13	26909442	Fixed Plate	1
14	26909441	Water Groove	1
15	01349413	Connection Board	1
16	26909432	Guide Louver	2
17	26909430	Rotating Shaft	6
18	12509424	Front foam assy	1
19	01349408P	Front panel	1
20	26909409	Supporter	3
21	01319400005	Rear Side Plate Assy	1
22	26909426R	Fixed Mount	1
23	30294000009	Display Board	1
24	01029400041	Evaporator Assy	1
25	26909413	Rotating Shaft	1
26	26909411	Connecting Rod	1
27	26909412	Rotating Shaft	1
28	1521240206	Step Motor	1
29	12509408	Left Foam Assy	1
30	01809401	Left Pensile Bracket	1
31	30224000029	Main Board	1
32	01429410P	Electric Box Cover	1
33	26909416	Left Cover	1
34	42010178	Terminal Board	1
35	4201025301	Terminal Board	1
36	01399400058	Electric Box Assy	1
37	01809404	Bracket 1	1
38	76512404	O-Gasket of Bearing	1
39	01792408	Support Of Motor Bearing	1
40	1041410101	Centrifugal fan	3
41	01249400002	Clapboard Sub-Assy	1
42	01349418	Rear connect plate	1
43	26905208	Front volute casing	3
44	73018731	Joint Slack	1
45	None	Motor Support Sub-Assy	0
46	15705200005	Brushless DC Motor	1
47	01809400029	Motor Support Sub-Assy	1
48	73018052	Rotary Axis Sub-Assy	1
49	26909419	Rear volute casing	3
50	01289405	Water tray assy	1
51	26909434	Front Grill	3
52	01269405	Top Cover Board Sub-assy	1
	30510460_K93693	Remote Controller	1
	30294000007_K93693	RCWE wired Remote Control	1

13.16 Spare part list of Indoor unit:AWSI-FADE036-N11

NO.	Part Code	Part Description	qty
1	05235434	Drainage Pipe Sub-assy	1
2	390001923	Tube sensor	1
3	39000191	Room Sensor	1
4	10582008	Swing Lever	2
5	26909418	Air Louver	18
6	10582009	Swing Lever	2
7	26909422	Right Cover	1
8	01809402	Right Pensile Bracket	1
9	02229406	Connection Board	1
10	01319408	Right Side Plate Sub-Assy	1
11	12509425	Right foam assy	1
12	10542704	Axile Bush	2
13	26909442	Fixed Plate	1
14	26909441	Water Groove	1
15	01349413	Connection Board	1
16	26909432	Guide Louver	2
17	26909430	Rotating Shaft	6
18	12509424	Front foam assy	1
19	01349408P	Front panel	1
20	26909409	Supporter	3
21	01319400005	Rear Side Plate Assy	1
22	26909426R	Fixed Mount	1
23	30294000009	Display Board	1
24	01029400050	Evaporator Assy	1
25	26909413	Rotating Shaft	1
26	26909411	Connecting Rod	1
27	26909412	Rotating Shaft	1
28	1521240206	Step Motor	1
29	12509408	Left Foam Assy	1
30	01809401	Left Pensile Bracket	1
31	30224000029	Main Board	1
32	01429410P	Electric Box Cover	1
33	26909416	Left Cover	1
34	42010178	Terminal Board	1
35	4201025301	Terminal Board	1
36	01399400058	Electric Box Assy	1
37	01809404	Bracket 1	1
38	76512404	O-Gasket of Bearing	1
39	01792408	Support Of Motor Bearing	1
40	1041410101	Centrifugal fan	3
41	01249400002	Clapboard Sub-Assy	1
42	01349418	Rear connect plate	1
43	26905208	Front volute casing	3
44	73018731	Joint Slack	1
45	None	Motor Support Sub-Assy	0
46	15705200005	Brushless DC Motor	1
47	01809400029	Motor Support Sub-Assy	1
48	73018052	Rotary Axis Sub-Assy	1
49	26909419	Rear volute casing	3
50	01289405	Water tray assy	1
51	26909434	Front Grill	3
52	01269405	Top Cover Board Sub-assy	1
	30510460_K93693	Remote Controller	1
	30294000007_K93693	RCWE wired Remote Control	1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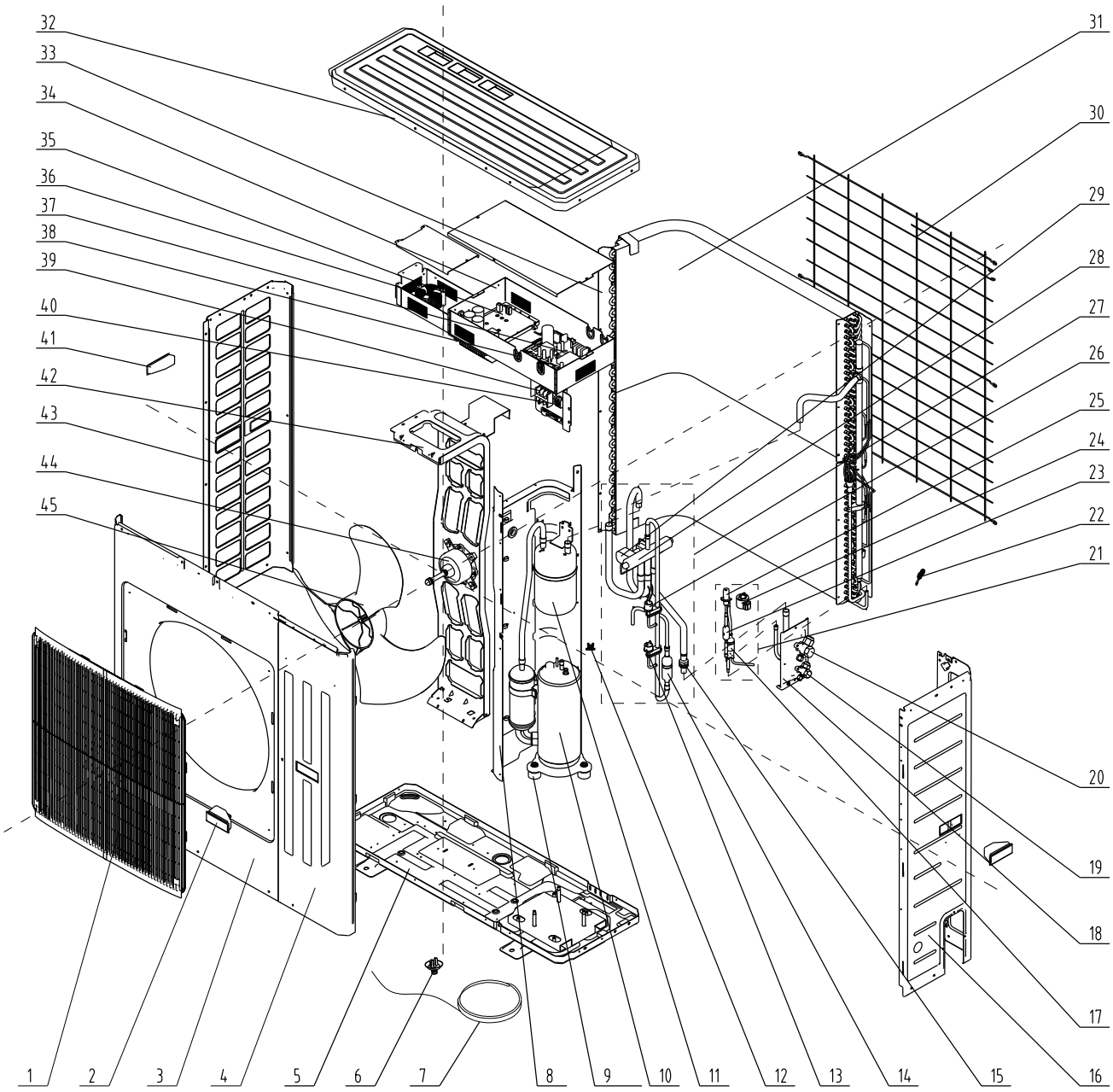
13.18 Spare Part List:AWAU-YUDE024-H11

NO.	Part Code	Part Description	qty
1	22415003	Front Grill	1
2	01435004P	Cabinet	1
3	10335014	Axial Flow Fan	1
4	01305086P	Front Side Plate	1
5	15702802	Fan Motor	1
6	0119520001301P	Chassis Sub-Assy	1
7	06123401	Drainage Connecter	1
8	7651873209	electrical heater	1
9	76713066	Compressor Gasket	3
10	0010505701	Compressor and Fittings	1
11	07220016	Bidirection Strainer	1
12	4304413208	Electronic Expansion Valve Fittings	1
13	4602000902	Pressure Protect Switch	1
14	07245012	Silencer	1
15	46020003	Pressure Protect Switch	1
16	0171501201P	Valve Support Sub-Assy	1
17	01315200069P	Right Side Plate Sub-Assy	1
18	22245003	Valve cover	1
19	07100005	Valve	1
20	26235001	Big Handle	1
21	07133157	Cut-off Valve	1
22	07215201	Filter	1
23	4300040033	Magnet Coil	1
24	4300008201	4-way Valve	1
25	07225088	Filter	1
26	3900028020G	Temperature Sensor	1
27	07334447	Electronic Expansion Valve	1
28	00180030	Compressor Overload Proctector(External)	1
29	01245200010	Clapboard Sub-Assy	1
30	01475008	Rear Grill	1
31	420111451	Terminal Board	1
32	420101852	Terminal Board	1
33	01125200184	Condenser Assy	1
34	01425281	Electric Box Cover	1
35	01255007	Top Cover Sub-Assy	1
36	01395200173	Electric Box Assy	1
37	30221000010	Main Board	1
38	30224000026	Main Board	1
39	01175092	Condenser support plate	1
40	26235401	Left Handle	1
41	01425279	Electric Box Cover	1
42	43128003	PFC Inductance	1
43	01395200176	Inductance Box Sub-Assy	1
44	01805200166	Motor Support Assy	1
45	01305043P	Left Side Plate	1

13.19 Spare Part List:AWAU-YUDE030-H11

NO.	Part Code	Part Description	qty
1	22415003	Front Grill	1
2	01435004P	Cabinet	1
3	10335014	Axial Flow Fan	1
4	01305086P	Front Side Plate	1
5	15702802	Fan Motor	1
6	01195200013P	Chassis Sub-assy	1
7	06123401	Drainage Connecter	1
8	7651873209	electrical heater	1
9	76713066	Compressor Gasket	3
10	0010505701	Compressor and Fittings	1
11	07220016	Bidirection Strainer	1
12	4304413208	Electronic Expansion Valve Fittings	1
13	4602000902	Pressure Protect Switch	1
14	07245012	Silencer	1
15	46020003	Pressure Protect Switch	1
16	0171501201P	Valve Support Sub-Assy	1
17	01315200069P	Right Side Plate Sub-Assy	1
18	22245003	Valve cover	1
19	07100005	Valve	1
20	26235001	Big Handle	1
21	07133157	Cut-off Valve	1
22	07215201	Filter	1
23	4300040033	Magnet Coil	1
24	4300008201	4-way Valve	1
25	07225088	Filter	1
26	3900028020G	Temperature Sensor	1
27	07334447	Electronic Expansion Valve	1
28	00180030	Compressor Overload Proctector(External)	1
29	01245200006	Clapboard Sub-Assy	1
30	01475008	Rear Grill	1
31	420111451	Terminal Board	1
32	420101852	Terminal Board	1
33	01125200182	Condenser Assy	1
34	01425281	Electric Box Cover	1
35	01255007	Top Cover Sub-Assy	1
36	01395200178	Electric Box Assy	1
37	30221000010	Main Board	1
38	30224000038	Main Board	1
39	01175092	Condenser support plate	1
40	26235401	Left Handle	1
41	01425279	Electric Box Cover	1
42	43128003	PFC Inductance	1
43	01395200176	Inductance Box Sub-Assy	1
44	01805200160	Motor Support Assy	1
45	01305043P	Left Side Plate	1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13.21 Spare Part List:AWAU-YUDE036-H11

NO.	Part Code	Part Description	qty
1	22415005	Front Grill	1
2	26235253	Handle	2
3	01435007P	Cabinet	1
4	01305508	Front Side Plate Sub-Assy	1
5	01195315P	Chassis Sub-assy	1
6	26113009	Drainage Joint	1
7	7651873209	electrical heater	1
8	01245253	Clapboard Sub-Assy	1
9	76713066	Compressor Gasket	1
10	00205200003	Compressor	1
11	07255201	Gas-liquid Separator Sub-Assy	1
12	00180030	Compressor Overload Proctector(External)	1
13	46020003	Pressure Protect Switch	1
14	07245012	Silencer	1
15	07215201	Filter	1
16	01315200068P	Right Side Plate Sub-Assy	1
17	07210045	Strainer	1
18	01715257P	Valve Support Sub-Assy	1
19	071302391	Cut off Valve	1
20	07133157	Cut-off Valve	1
21	43045200007	Electronic Expansion Valve Sub-Assy	1
22	39008000049G	Temperature Sensor	1
23	07213032	Strainer	1
24	43000344	Electronic Expansion Valve Coil	1
25	07334194	Electronic Expansion Valve	1
	07135176	Electronic Expansion Valve	1
26	4602000902	Pressure Protect Switch	1
27	04045200038	4-Way Valve Assy	1
28	43000338	4-way Valve	1
29	4300040045	Magnet Coil(4-way Valve)	1
	4300040033	Magnet Coil	1
30	01475012	Rear Grill	1
31	01125200196	Condenser Assy	1
32	0125500901P	Top Cover	1
33	01895242	Condenser support plate	1
34	01395200180	Electric Box Assy	1
35	30221000003	Main Board	1
36	43120011	PFC Inductance	1
37	30224000037	Main Board	1
38	30221000007	Filter Board	1
39	42011242	Terminal Board	1
40	420101852	Terminal Board	1
41	26235253	Left Handle	1
	26235401	Left Handle	1
42	01805200190	Motor Support Sub-Assy	1
43	01305064P	Left Side Plate	1
44	1570280201	Fan Motor	1
45	10335010	Axial Flow Fan	1
	00183032	Compressor Overload Protector	1
	00183051	Compressor Overload Protector(External)	1
	26905202	Sensor support	1

APPENDIX