



Service Manual

DCI Light Commercial Series

CBD Indoor Units	DCD Indoor Units	FBD Indoor Units		Outdoor Units
AWSI-KBD12-N11	AWSI-OCD012-N11			AWAU-VLD012-H11
AWSI-KBD018-N11	AWSI-OCD018-N11	AWSI-TBD018-N11		AWAU-VLD018-H11
AWSI-KBD024-N11	AWSI-OCD024-N11	AWSI-TBD024-N11		AWAU-VLD024-H11
AWSI-KBD030-N11	AWSI-OCD030-N11	AWSI-TBD030-N11		AWAU-VLD030-H11
AWSI-KBD036-N11	AWSI-OCD036-N11	AWSI-TBD036-N11		AWAU-VLD036-H11
				AWAU-VLD036-H13
AWSI-KBD048-N11	AWSI-OCD048-N11	AWSI-TBD048-N11		AWAU-VLD048-H13
	AWSI-OCD060-N11			AWAU-VLD060-H13

REFRIGERANT

R410A

HEAT PUMP

SM DCI LC 1-A.1 GB

Jan' – 2014

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※The specifications, designs, and information in this book are subject to change without notice for product improvement.

Part 1

General Information

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1. Model Lists

1.1 Indoor Units

R410A (capacity multiplied by 1000Btu/h)

Type	Function	12	18	24	30	36	48	60
Super slim cassette	Cooling and heating			●	●	●	●	
Duct	Cooling and heating	●	●	●	●	●	●	●
Ceiling-floor	Cooling and heating		●	●	●	●	●	
Four-way cassette(compact)	Cooling and heating	●	●					
Console	Cooling and heating	●	●					

1.2 Outdoor Units

Universal Outdoor unit Model	Compressor type	Compressor Brand	Matched indoor units
AWAU-VLD012-H11	Rotary	GMCC	AWSI-KBD012-N11 AWSI-OCD012-11
AWAU-VLD018-H11	Rotary	GMCC	AWSI-KBD018-N11 AWSI-OCD018-11 AWSI-TBD018-N11
AWAU-VLD024-H11	Twin-rotary	GMCC	AWSI-KBD024-N11 AWSI-OCD024-11 AWSI-TBD024-N11
AWAU-VLD030-H11	Twin-rotary	GMCC	AWSI-OCD030-11 AWSI-KBD030-N11 AWSI-TBD030-N11
AWAU-VLD036-H11	Twin-rotary	Mitsubishi	AWSI-KBD036-N11 AWSI-OCD036-11 AWSI-TBD036-N11
AWAU-VLD036-H13	Twin-rotary	Mitsubishi	
AWAU-VLD048-H13	Twin-rotary	Mitsubishi	AWSI-OCD048-11 AWSI-TBD048-N11 AWSI-KBD048-N11
AWAU-VLD060-H13	Twin-rotary	Mitsubishi	AWSI-OCD060-N11

2. External Appearance

2.1 Indoor Units

Compact Four-way cassette



Super slim cassette



Ceiling-Floor



Console



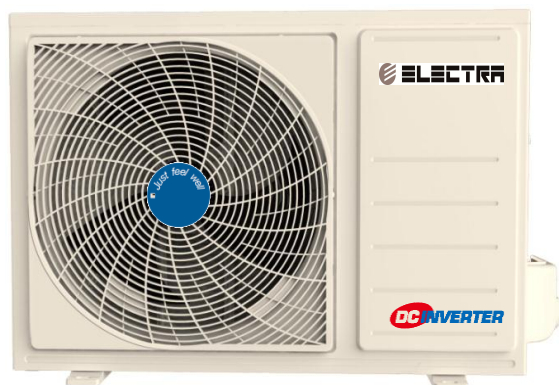
Duct(12000-48000Btu/h)



Duct(60000Btu/h)



2.2 Outdoor Units



Single fan outdoor unit



Double fan outdoor unit

3. Product specification

Model Indoor Unit				AWSI-KBD012-N11		
Model Outdoor Unit				AWAU-VLD012-H11		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	3.5	3.5	
Pdesign			kW	3.5	3.5	
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.6	3.8	
Energy efficiency class				A+	A	
Annual energy consumption			kWh	219	1289	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating			A	16		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	830/720/660	830/720/660	
	Air flow ⁽³⁾	H/M/L	m3/hr	800/710/560	800/710/560	
	External static pressure	Min-Max	Pa	0		
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	55		
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	800/710/560		
	Moisture removal		l/hr	1.5		
	Condensate drain tube I.D		mm	ODΦ25		
	Dimensions	WxHxD	mm	570x570x260		
	Weight		kg	16		
	Package dimensions	WxHxD	mm	655x655x290		
	Packaged weight		kg	19		
	Frame outline dimensions	WxHxD	mm	647x50x647		
	Frame Weight		kg	2.5		
	Frame package dimensions	WxHxD	mm	715x715x123		
	Frame Packaged weight		kg	4.5		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
Compressor type, model			Rotary DC Inverter			
Fan type & quantity			Axial x 1			
Fan speeds		H/L	RPM	850		
Air flow		H/L	m3/hr	2200		
Sound power level ⁽⁴⁾		H/L	dB(A)	62		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	58		
Dimensions		WxHxD	mm	760x285x590		
Weight		kg	35.4			
Package dimensions		WxHxD	mm	887x355x645		
Packaged weight		kg	37.9			
Stacking height		units	4 levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	1.1			
Additional charge per 1 meter		gr / 1m	15			
Connections between units		Liquid line		In.(mm)	1/4"(Φ6.35)	
		Suction line		In.(mm)	3/8"(Φ9.52)	
		Max.tubing length		m.	Max.20	
	Max.height difference		m.	Max.10		
Operation control type				Remote control		

Model Indoor Unit				AWSI-OCD012-N11	
Model Outdoor Unit				AWAU-VLD012-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	3.5	3.8
Pdesign			kW	3.5	3.4
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	240.1960784	1252.631579
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	16	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	1200/1070/900	1200/1070/900
	Air flow ⁽³⁾	H/M/L	m3/hr	800/610/520	800/610/520
	External static pressure	Min-Max	Pa	25(0~40)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	57	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	41/39/36	
	Moisture removal		l/hr	1.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	700x210x635	
	Weight		kg	18	
	Package dimensions	WxHxD	mm	915x655x290	
	Packaged weight		kg	22.8	
	Stacking height		units	6levels	
OUTDOOR	Refrigerant control			Capillary +EXV	
	Compressor type, model			Rotary DC Inverter	
	Fan type & quantity			Axial x 1	
	Fan speeds	H/L	RPM	850	
	Air flow	H/L	m3/hr	2200	
	Sound power level ⁽⁴⁾	H/L	dB(A)	62	
	Sound pressure level ⁽⁵⁾	H/L	dB(A)	58	
	Dimensions	WxHxD	mm	760x285x590	
	Weight		kg	35.4	
	Package dimensions	WxHxD	mm	887x355x645	
	Packaged weight		kg	37.9	
	Stacking height		units	4 levels	
	Refrigerant type			R410A	
	Refrigerant charge (standard connecting tubing length)		kg(5m)	1.1	
	Additional charge per 1 meter		gr / 1m	15	
	Connections between units	Liquid line	In.(mm)	1/4"(Φ6.35)	
		Suction line	In.(mm)	3/8"(Φ9.52)	
		Max.tubing length	m.	Max.20	
		Max.height difference	m.	Max.10	
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-KBD018-N11		
Model Outdoor Unit				AWAU-VLD018-H11		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	5	5.3	
Pdesign			kW	5	5.3	
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.6	3.8	
Energy efficiency class				A+	A	
Annual energy consumption			kWh	313	1953	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating			A	10+16		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	830/720/660	830/720/660	
	Air flow ⁽³⁾	H/M/L	m3/hr	800/710/560	800/710/560	
	External static pressure	Min-Max	Pa	0		
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	60		
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	800/710/560		
	Moisture removal		l/hr	2.0		
	Condensate drain tube I.D		mm	ODΦ25		
	Dimensions	WxHxD	mm	570x260x570		
	Weight		kg	18		
	Package dimensions	WxHxD	mm	655x655x290		
	Packaged weight		kg	21		
	Frame outline dimensions	WxHxD	mm	647x50x647		
	Frame Weight		kg	2.5		
	Frame package dimensions	WxHxD	mm	715x715x123		
	Frame Packaged weight		kg	4.5		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
		Compressor type, model			Rotary DC Inverter	
Fan type & quantity			Axial x 1			
Fan speeds		H/L	RPM	800		
Air flow		H/L	m3/hr	2500		
Sound power level ⁽⁴⁾		H/L	dB(A)	66		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	60		
Dimensions		WxHxD	mm	845x320x700		
Weight		kg	46			
Package dimensions		WxHxD	mm	965x395x755		
Packaged weight		kg	50			
Stacking height		units	3levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	1.8			
Additional charge per 1 meter		gr / 1m	15			
Connections between units		Liquid line	In.(mm)	1/4"(Φ6.35)		
		Suction line	In.(mm)	1/2"(Φ12.7)		
		Max.tubing length	m.	Max.30		
	Max.height difference	m.	Max.20			
Operation control type				Remote control		

Model Indoor Unit				AWSI-TBD018-N11	
Model Outdoor Unit				AWAU-VLD018-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	5.3	5.9
Pdesign			kW	5.3	5.3
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.1	3.8
Energy efficiency class				A++	A
Annual energy consumption			kWh	304	1953
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+16	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	950/850/750	950/850/750
	Air flow ⁽³⁾	H/M/L	m3/hr	900/750/600	900/750/600
	External static pressure	Min-Max	Pa	0	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	60	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	46/43/40	
	Moisture removal		l/hr	2.0	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1068x235x675	
	Weight		kg	25	
	Package dimensions	WxHxD	mm	1145x755x313	
	Packaged weight		kg	31.5	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	800	
Air flow		H/L	m3/hr	2500	
Sound power level ⁽⁴⁾		H/L	dB(A)	66	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	60	
Dimensions		WxHxD	mm	845x320x700	
Weight		kg	46		
Package dimensions		WxHxD	mm	965x395x755	
Packaged weight		kg	50		
Stacking height		units	3levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	1.8		
Additional charge per 1 meter		gr / 1m	15		
Connections between units		Liquid line	In.(mm)	1/4"(Φ6.35)	
		Suction line	In.(mm)	1/2"(Φ12.7)	
		Max.tubing length	m.	Max.30	
		Max.height difference	m.	Max.20	
Operation control type				Remote control	

Model Indoor Unit				AWSI-OCD018-N11	
Model Outdoor Unit				AWAU-VD018-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	5.3	5.6
Pdesign			kW	5.3	5.1
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.4	3.8
Energy efficiency class				A++	A
Annual energy consumption			kWh	290	1879
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+16	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	1150/1000/930	1150/1000/930
	Air flow ⁽³⁾	H/M/L	m3/hr	1400/1100/1000	1400/1100/1000
	External static pressure	Min-Max	Pa	25(0~70)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	58	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	45/43/39	
	Moisture removal		l/hr	2.0	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	920x270x635	
	Weight		kg	28	
	Package dimensions	WxHxD	mm	1135x655x350	
	Packaged weight		kg	31.5	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	800	
Air flow		H/L	m3/hr	2500	
Sound power level ⁽⁴⁾		H/L	dB(A)	66	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	60	
Dimensions		WxHxD	mm	845x320x700	
Weight		kg	46		
Package dimensions		WxHxD	mm	965x395x755	
Packaged weight		kg	50		
Stacking height		units	3levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	1.8		
Additional charge per 1 meter		gr / 1m	15		
Connections between units		Liquid line	In.(mm)	1/4"(Φ6.35)	
		Suction line	In.(mm)	1/2"(Φ12.7)	
		Max.tubing length	m.	Max.30	
	Max.height difference	m.	Max.20		
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-KBD024-N11		
Model Outdoor Unit				AWAU-VLD024-H11		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	7.2	8	
Pdesign			kW	7.2	7.8	
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.1	3.9	
Energy efficiency class				A++	A	
Annual energy consumption			kWh	413	2800	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating			A	10+20		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	700/600/450	700/600/450	
	Air flow ⁽³⁾	H/M/L	m3/hr	1780/1560/1360	1780/1560/1360	
	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)	50/47/45		
	Moisture removal		l/hr	2.5		
	Condensate drain tube I.D		mm	ODΦ32		
	Dimensions	WxHxD	mm	840x840x245		
	Weight		kg	24		
	Package dimensions	WxHxD	mm	900x900x265		
	Packaged weight		kg	28		
	Frame outline dimensions	WxHxD	mm	950x950x55		
	Frame Weight		kg	5		
	Frame package dimensions	WxHxD	mm	1035x1035x90		
	Frame Packaged weight		kg	8		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
		Compressor type, model			Twin-rotary DC Inverter	
Fan type & quantity			Axial x 1			
Fan speeds		H/L	RPM	800		
Air flow		H/L	m3/hr	3500		
Sound power level ⁽⁴⁾		H/L	dB(A)	69		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	60		
Dimensions		WxHxD	mm	900x315x860		
Weight		kg	59			
Package dimensions		WxHxD	mm	1043x395x915		
Packaged weight		kg	63			
Stacking height		units	2levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.2			
Additional charge per 1 meter		gr / 1m	30			
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)		
		Suction line	In.(mm)	5/8"(Φ15.9)		
		Max.tubing length	m.	50		
	Max.height difference	m.	25			
Operation control type				Remote control		

Model Indoor Unit				AWSI-TBD024-N11	
Model Outdoor Unit				AWAU-VLD024-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	7.2	7.8
Pdesign			kW	7.2	7.8
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.4	3.9
Energy efficiency class				A++	A
Annual energy consumption			kWh	394	2800
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+20	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	1200/1080/890	1200/1080/890
	Air flow ⁽³⁾	H/M/L	m3/hr	1400/1250/1100	1400/1250/1100
	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)	55/50/46	
	Moisture removal		l/hr	2.3	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1068x675x235	
	Weight		kg	25	
	Package dimensions	WxHxD	mm	1145x755x313	
	Packaged weight		kg	30	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	800	
Air flow		H/L	m3/hr	3500	
Sound power level ⁽⁴⁾		H/L	dB(A)	69	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	60	
Dimensions		WxHxD	mm	900x315x860	
Weight		kg	59		
Package dimensions		WxHxD	mm	1043x395x915	
Packaged weight		kg	63		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.2		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	ln.(mm)	3/8"(Φ9.52)	
		Suction line	ln.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	50	
	Max.height difference	m.	25		
Operation control type				Remote control	

Model Indoor Unit				AWSI-OCD024-N11	
Model Outdoor Unit				AWAU-VLD024-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	7	7.8
Pdesign			kW	7	7.8
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.6	3.8
Energy efficiency class				A++	A
Annual energy consumption			kWh	371	2874
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+20	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	1220/1150/1000	1220/1150/1000
	Air flow ⁽³⁾	H/M/L	m3/hr	1700/1400/1250	1700/1400/1250
	External static pressure	Min-Max	Pa	40(0~70)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	63	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	46/43/39	
	Moisture removal		l/hr	2.3	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	920x635x270	
	Weight		kg	28	
	Package dimensions	WxHxD	mm	1135x655x350	
	Packaged weight		kg	31,5	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	800	
Air flow		H/L	m3/hr	3500	
Sound power level ⁽⁴⁾		H/L	dB(A)	69	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	60	
Dimensions		WxHxD	mm	900x315x860	
Weight		kg	59		
Package dimensions		WxHxD	mm	1043x395x915	
Packaged weight		kg	63		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.2		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	ln.(mm)	3/8"(Φ9.52)	
		Suction line	ln.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	50	
	Max.height difference	m.	25		
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-KBD030-N11		
Model Outdoor Unit				AWAU-VLD030-H11		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	8.5	8.6	
Pdesign			kW	8.5	8.1	
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.4	3.9	
Energy efficiency class				A++	A	
Annual energy consumption			kWh	465	2908	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating			A	10+30		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	720/630/560	720/630/560	
	Air flow ⁽³⁾	H/M/L	m3/hr	1850/1600/1400	1850/1600/1400	
	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)	52/48/45		
	Moisture removal		l/hr	3.0		
	Condensate drain tube I.D		mm	ODΦ32		
	Dimensions	WxHxD	mm	840x840x245		
	Weight		kg	26.5		
	Package dimensions	WxHxD	mm	900x900x265		
	Packaged weight		kg	30.5		
	Frame outline dimensions	WxHxD	mm	950x950x55		
	Frame Weight		kg	5		
	Frame package dimensions	WxHxD	mm	1035x1035x90		
	Frame Packaged weight		kg	8		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
		Compressor type, model			Twin-rotary DC Inverter	
Fan type & quantity			Axial x 1			
Fan speeds		H/L	RPM	860		
Air flow		H/L	m3/hr	3800		
Sound power level ⁽⁴⁾		H/L	dB(A)	70		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	61		
Dimensions		WxHxD	mm	900x315x860		
Weight		kg	59			
Package dimensions		WxHxD	mm	1043x395x915		
Packaged weight		kg	63			
Stacking height		units	2levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.45			
Additional charge per 1 meter		gr / 1m	30			
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)		
		Suction line	In.(mm)	5/8"(Φ15.9)		
		Max.tubing length	m.	50		
	Max.height difference	m.	25			
Operation control type				Remote control		

Model Indoor Unit				AWSI-TBD030-N11	
Model Outdoor Unit				AWAU-VLD030-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	8.5	9
Pdesign			kW	8.5	8.5
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.4	3.9
Energy efficiency class				A++	A
Annual energy consumption			kWh	465	3051
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+30	
INDOOR	Fan type & quantity			Centrifugal fan x3	
	Fan speeds	H/M/L	RPM	1300/1150/1000	1300/1150/1000
	Air flow ⁽³⁾	H/M/L	m3/hr	1850/1650/1450	1850/1650/1450
	External static pressure	Min-Max	Pa	0	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	64	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	55/50/46	
	Moisture removal		l/hr	2.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1285x675x235	
	Weight		kg	30	
	Package dimensions	WxHxD	mm	1360x755x313	
	Packaged weight		kg	35	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	3800	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	61	
Dimensions		WxHxD	mm	900x315x860	
Weight		kg	59		
Package dimensions		WxHxD	mm	1043x395x915	
Packaged weight		kg	63		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.45		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	50	
	Max.height difference	m.	25		
Operation control type				Remote control	

Model Indoor Unit				AWSI-OCD030-N11	
Model Outdoor Unit				AWAU-VLD030-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	8.3	9.2
Pdesign			kW	8.3	8.5
SEER/EER /SCOP/COP ⁽²⁾			W/W	6.3	3.8
Energy efficiency class				A++	A
Annual energy consumption			kWh	461	3132
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+30	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	1100/950/800	1100/950/800
	Air flow ⁽³⁾	H/M/L	m3/hr	1850/1600/1400	1850/1600/1400
	External static pressure	Min-Max	Pa	50(0~80)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	65	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	48/44/40	
	Moisture removal		l/hr	2.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1140x775x270	
	Weight		kg	35	
	Package dimensions	WxHxD	mm	1355x795x350	
	Packaged weight		kg	42	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	3800	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	61	
Dimensions		WxHxD	mm	900x315x860	
Weight		kg	59		
Package dimensions		WxHxD	mm	1043x395x915	
Packaged weight		kg	63		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.45		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	50	
	Max.height difference	m.	25		
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-KBD036-N11		
Model Outdoor Unit				AWAU-VLD036-H11		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	10	10.5	
Pdesign			kW	10	10	
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.4	3.8	
Energy efficiency class				A	A	
Annual energy consumption			kWh	648	3684	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Circuit breaker rating			A	10+30		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	720/630/560	720/630/560	
	Air flow ⁽³⁾	H/M/L	m3/hr	1850/1600/1400	1850/1600/1400	
	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)	53/49/46		
	Moisture removal		l/hr	3.8		
	Condensate drain tube I.D		mm	ODΦ32		
	Dimensions	WxHxD	mm	840x840x245		
	Weight		kg	26.5		
	Package dimensions	WxHxD	mm	900x900x265		
	Packaged weight		kg	30.5		
	Frame outline dimensions	WxHxD	mm	950x950x55		
	Frame Weight		kg	5		
	Frame package dimensions	WxHxD	mm	1035x1035x90		
	Frame Packaged weight		kg	8		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
		Compressor type, model			Twin-rotary DC Inverter	
Fan type & quantity			Axial x 1			
Fan speeds		H/L	RPM	860		
Air flow		H/L	m3/hr	7200		
Sound power level ⁽⁴⁾		H/L	dB(A)	70		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63		
Dimensions		WxHxD	mm	990x345x965		
Weight		kg	73			
Package dimensions		WxHxD	mm	1120x435x1100		
Packaged weight		kg	83			
Stacking height		units	2levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.75			
Additional charge per 1 meter		gr / 1m	30			
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)		
		Suction line	In.(mm)	5/8"(Φ15.9)		
		Max.tubing length	m.	65		
		Max.height difference	m.	30		
Operation control type				Remote control		

Model Indoor Unit				AWSI-TBD036-N11	
Model Outdoor Unit				AWAU-VLD036-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	10.5	11
Pdesign			kW	10.5	10.2
SEER/EER /SCOP/COP ⁽²⁾			W/W	6	3.8
Energy efficiency class				A+	A
Annual energy consumption			kWh	613	3758
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+30	
INDOOR	Fan type & quantity			Centrifugal fan x4	
	Fan speeds	H/M/L	RPM	1200/1050/850	1200/1050/850
	Air flow ⁽³⁾	H/M/L	m3/hr	2200/1850/1500	2200/1850/1500
	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)	54/49/44	
	Moisture removal		l/hr	3.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1650x675x235	
	Weight		kg	40	
	Package dimensions	WxHxD	mm	1725x755x313	
	Packaged weight		kg	46	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7200	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63	
Dimensions		WxHxD	mm	990x345x965	
Weight		kg	73		
Package dimensions		WxHxD	mm	1120x435x1100	
Packaged weight		kg	83		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.75		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	65	
		Max.height difference	m.	30	
Operation control type				Remote control	

Model Indoor Unit				AWSI-OCD036-N11	
Model Outdoor Unit				AWAU-VLD036-H11	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	10	11
Pdesign			kW	10	10.2
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.3	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	660	3758
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	220-240V/Single/50Hz	
Circuit breaker rating			A	10+30	
INDOOR	Fan type & quantity			Centrifugal fan x3	
	Fan speeds	H/M/L	RPM	1150/1040/970	1150/1040/970
	Air flow ⁽³⁾	H/M/L	m3/hr	2270/1890/1650	2270/1890/1650
	External static pressure	Min-Max	Pa	50(0~80)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	62	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	42/39/36	
	Moisture removal		l/hr	3.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1200x865x300	
	Weight		kg	44	
	Package dimensions	WxHxD	mm	1385x920x373	
	Packaged weight		kg	52.5	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7200	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63	
Dimensions		WxHxD	mm	990x345x965	
Weight		kg	73		
Package dimensions		WxHxD	mm	1120x435x1100	
Packaged weight		kg	83		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	2.75		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	65	
		Max.height difference	m.	30	
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-KBD036-N11		
Model Outdoor Unit				AWAU-VLD036-H13		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	10	10.5	
Pdesign			kW	10	10	
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.4	3.8	
Energy efficiency class				A	A	
Annual energy consumption			kWh	648	3684	
Tbiv			°C	N/A	-7	
Tol			°C	N/A	-15	
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz		
Circuit breaker rating			A	10+20		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	720/630/560	720/630/560	
	Air flow ⁽³⁾	H/M/L	m3/hr	1850/1600/1400	1850/1600/1400	
	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)	53/49/46		
	Moisture removal		l/hr	3.8		
	Condensate drain tube I.D		mm	ODΦ32		
	Dimensions	WxHxD	mm	840x840x245		
	Weight		kg	26.5		
	Package dimensions	WxHxD	mm	900x900x265		
	Packaged weight		kg	30.5		
	Frame outline dimensions	WxHxD	mm	950x950x55		
	Frame Weight		kg	5		
	Frame package dimensions	WxHxD	mm	1035x1035x90		
	Frame Packaged weight		kg	8		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
		Compressor type, model			Twin-rotary DC Inverter	
Fan type & quantity			Axial x 1			
Fan speeds		H/L	RPM	860		
Air flow		H/L	m3/hr	7200		
Sound power level ⁽⁴⁾		H/L	dB(A)	70		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63		
Dimensions		WxHxD	mm	990x345x965		
Weight		kg	77			
Package dimensions		WxHxD	mm	1120x435x1100		
Packaged weight		kg	88			
Stacking height		units	2levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	3			
Additional charge per 1 meter		gr / 1m	30			
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)		
		Suction line	In.(mm)	5/8"(Φ15.9)		
		Max.tubing length	m.	65		
	Max.height difference	m.	30			
Operation control type				Remote control		

Model Indoor Unit				AWSI-TBD036-N11	
Model Outdoor Unit				AWAU-VLD036-H13	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	10.2	11
Pdesign			kW	10.2	10
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.7	3.8
Energy efficiency class				A+	A
Annual energy consumption			kWh	626	3684
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz	
Circuit breaker rating			A	10+20	
INDOOR	Fan type & quantity			Centrifugal fan x4	
	Fan speeds	H/M/L	RPM	1200/1050/850	1200/1050/850
	Air flow ⁽³⁾	H/M/L	m3/hr	2200/1850/1500	2200/1850/1500
	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)	54/49/44	
	Moisture removal		l/hr	3.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1650x675x235	
	Weight		kg	40	
	Package dimensions	WxHxD	mm	1725x755x313	
	Packaged weight		kg	46	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7200	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63	
Dimensions		WxHxD	mm	990x345x965	
Weight		kg	77		
Package dimensions		WxHxD	mm	1120x435x1100	
Packaged weight		kg	88		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	3		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	ln.(mm)	3/8"(Φ9.52)	
		Suction line	ln.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	65	
	Max.height difference	m.	30		
Operation control type				Remote control	

Model Indoor Unit				AWSI-OCD036-N11	
Model Outdoor Unit				AWAU-VLD036-H13	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	10.2	11
Pdesign			kW	10.2	10.2
SEER/EER /SCOP/COP ⁽²⁾			W/W	5.1	3.8
Energy efficiency class				A	A
Annual energy consumption			kWh	700	3758
Tbiv			°C	N/A	-7
Tol			°C	N/A	-15
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz	
Circuit breaker rating			A	10+20	
INDOOR	Fan type & quantity			Centrifugal fan x3	
	Fan speeds	H/M/L	RPM	1150/1040/970	1150/1040/970
	Air flow ⁽³⁾	H/M/L	m3/hr	2270/1890/1650	2270/1890/1650
	External static pressure	Min-Max	Pa	50(0~80)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	62	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	42/39/36	
	Moisture removal		l/hr	3.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1200x865x300	
	Weight		kg	44	
	Package dimensions	WxHxD	mm	1385x920x373	
	Packaged weight		kg	52.5	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 1		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7200	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63	
Dimensions		WxHxD	mm	990x345x965	
Weight		kg	77		
Package dimensions		WxHxD	mm	1120x435x1100	
Packaged weight		kg	88		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	3		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	65	
	Max.height difference	m.	30		
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-KBD048-N11		
Model Outdoor Unit				AWAU-VLD048-H13		
Installation Method of Pipe				Flared		
Characteristics			Units	Cooling	Heating	
					Average	
Capacity ⁽¹⁾			kW	12.5	13	
Pdesign			kW	-	-	
SEER/EER /SCOP/COP ⁽²⁾			W/W	3.21	3.61	
Energy efficiency class				A	A	
Annual energy consumption			kWh	-	-	
Tbiv			°C	-	-	
Tol			°C	-	-	
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz		
Circuit breaker rating			A	10+25		
INDOOR	Fan type & quantity			Centrifugal fan x1		
	Fan speeds	H/M/L	RPM	770/610/540	770/610/540	
	Air flow ⁽³⁾	H/M/L	m3/hr	2200/1800/1600	2200/1800/1600	
	External static pressure	Min-Max	Pa	0		
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	64		
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	54/50/47		
	Moisture removal		l/hr	4.5		
	Condensate drain tube I.D		mm	ODΦ32		
	Dimensions	WxHxD	mm	840x840x287		
	Weight		kg	29		
	Package dimensions	WxHxD	mm	900x900x292		
	Packaged weight		kg	33		
	Frame outline dimensions	WxHxD	mm	950x950x55		
	Frame Weight		kg	5		
	Frame package dimensions	WxHxD	mm	1035x1035x90		
	Frame Packaged weight		kg	8		
	Stacking height		units	7levels		
	OUTDOOR	Refrigerant control			Capillary +EXV	
		Compressor type, model			Twin-rotary DC Inverter	
Fan type & quantity			Axial x 2			
Fan speeds		H/L	RPM	860		
Air flow		H/L	m3/hr	7200		
Sound power level ⁽⁴⁾		H/L	dB(A)	70		
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63		
Dimensions		WxHxD	mm	938x392x1369		
Weight		kg	102.5			
Package dimensions		WxHxD	mm	1095x495x1505		
Packaged weight		kg	116			
Stacking height		units	2levels			
Refrigerant type			R410A			
Refrigerant charge (standard connecting tubing length)		kg(5m)	4.35			
Additional charge per 1 meter		gr / 1m	30			
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)		
		Suction line	In.(mm)	5/8"(Φ15.9)		
		Max.tubing length	m.	65		
	Max.height difference	m.	30			
Operation control type				Remote control		

Model Indoor Unit				AWSI-TBD048-N11	
Model Outdoor Unit				AWAU-VLD048-H13	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	14	14.6
Pdesign			kW	-	-
SEER/EER /SCOP/COP ⁽²⁾			W/W	3.21	3.61
Energy efficiency class				A	A
Annual energy consumption			kWh	-	-
Tbiv			°C	-	-
Tol			°C	-	-
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz	
Circuit breaker rating			A	10+25	
INDOOR	Fan type & quantity			Centrifugal fan x4	
	Fan speeds	H/M/L	RPM	1320/1200/1120	1320/1200/1120
	Air flow ⁽³⁾	H/M/L	m3/hr	2300/1900/1700	2300/1900/1700
	External static pressure	Min-Max	Pa	0	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	68	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	57/54/51	
	Moisture removal		l/hr	4.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1650x675x235	
	Weight		kg	40	
	Package dimensions	WxHxD	mm	1725x755x313	
	Packaged weight		kg	46	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 2		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7200	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63	
Dimensions		WxHxD	mm	938x392x1369	
Weight		kg	102.5		
Package dimensions		WxHxD	mm	1095x495x1505	
Packaged weight		kg	116		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	4.35		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	65	
	Max.height difference	m.	30		
Operation control type				Remote control	

Model Indoor Unit				AWSI-OCD048-N11	
Model Outdoor Unit				AWAU-VLD048-H13	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	14	17
Pdesign			kW	-	-
SEER/EER /SCOP/COP ⁽²⁾			W/W	3.21	3.72
Energy efficiency class				A	A
Annual energy consumption			kWh	-	-
Tbiv			°C	-	-
Tol			°C	-	-
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz	
Circuit breaker rating			A	10+25	
INDOOR	Fan type & quantity			Centrifugal fan x3	
	Fan speeds	H/M/L	RPM	1200/1100/1020	1200/1100/1020
	Air flow ⁽³⁾	H/M/L	m3/hr	3010/2410/1940	3010/2410/1940
	External static pressure	Min-Max	Pa	70(0~100)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	62	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	42/39/36	
	Moisture removal		l/hr	4.5	
	Condensate drain tube I.D		mm	ODΦ25	
	Dimensions	WxHxD	mm	1200x865x300	
	Weight		kg	44	
	Package dimensions	WxHxD	mm	1385x920x373	
	Packaged weight		kg	53	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 2		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7200	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	63	
Dimensions		WxHxD	mm	938x392x1369	
Weight		kg	102.5		
Package dimensions		WxHxD	mm	1095x495x1505	
Packaged weight		kg	116		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	4.35		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	5/8"(Φ15.9)	
		Max.tubing length	m.	65	
	Max.height difference	m.	30		
Operation control type				Wired Remote control	

Model Indoor Unit				AWSI-OCD060-N11	
Model Outdoor Unit				AWAU-VLD060-H13	
Installation Method of Pipe				Flared	
Characteristics			Units	Cooling	Heating
					Average
Capacity ⁽¹⁾			kW	16	19.5
Pdesign			kW	-	-
SEER/EER /SCOP/COP ⁽²⁾			W/W	3.22	3.62
Energy efficiency class				A	A
Annual energy consumption			kWh	-	-
Tbiv			°C	-	-
Tol			°C	-	-
Power supply			V/Ph/Hz	380-420V/Three-phase/50Hz	
Circuit breaker rating			A	10+25	
INDOOR	Fan type & quantity			Centrifugal fan x2	
	Fan speeds	H/M/L	RPM	1070/920/820	1070/920/820
	Air flow ⁽³⁾	H/M/L	m3/hr	3350/3050/2750	3350/3050/2750
	External static pressure	Min-Max	Pa	70(0~200)	
	Sound power level ⁽⁴⁾	H/M/L	dB(A)	67	
	Sound pressure level ⁽⁵⁾	H/M/L	dB(A)	57/54/51	
	Moisture removal		l/hr	5.0	
	Condensate drain tube I.D		mm	0DΦ25	
	Dimensions	WxHxD	mm	1400x770x440	
	Weight		kg	75	
	Package dimensions	WxHxD	mm	1605x910x485	
	Packaged weight		kg	83	
	Stacking height		units	6levels	
	OUTDOOR	Refrigerant control			Capillary +EXV
Compressor type, model			Twin-rotary DC Inverter		
Fan type & quantity			Axial x 2		
Fan speeds		H/L	RPM	860	
Air flow		H/L	m3/hr	7500	
Sound power level ⁽⁴⁾		H/L	dB(A)	70	
Sound pressure level ⁽⁵⁾		H/L	dB(A)	64	
Dimensions		WxHxD	mm	938x1369x392	
Weight		kg	102,5		
Package dimensions		WxHxD	mm	1095x1505x495	
Packaged weight		kg	116		
Stacking height		units	2levels		
Refrigerant type			R410A		
Refrigerant charge (standard connecting tubing length)		kg(5m)	4.8		
Additional charge per 1 meter		gr / 1m	30		
Connections between units		Liquid line	In.(mm)	3/8"(Φ9.52)	
		Suction line	In.(mm)	3/4"(Φ19)	
		Max.tubing length	m.	65	
	Max.height difference	m.	30		
Operation control type				Wired Remote control	

4. Features

- 4.1. To meet Europe A level, actual EER/COP of new product with BLDC motors of indoor & outdoor unit and DC compressor will be higher than 3.4.
- 4.2. Low ambient kit is standard for outdoor units
- 4.3. Network control function is standard for the indoor units.
- 4.4. Standard auto restart function and follow me function.
- 4.5. Slim cassette with standard remote controller, wire controller and CCM for optional. Med Duct and HESP duct with standard wired controller, remote controller and CCM for optional.
- 4.6. Standard anti-cold air function.
- 4.7. Standard auto defrosting function.
- 4.8. Standard self-diagnose function.
- 4.9. Standard timer function and sleep mode function controlled by controller.

Part 2

Indoor Units

Super Slim Cassette Type.....	29
Duct Type.....	49
Ceiling & Floor Type	84
New Four-way Cassette Type (Compact)	103
Console Type.....	116

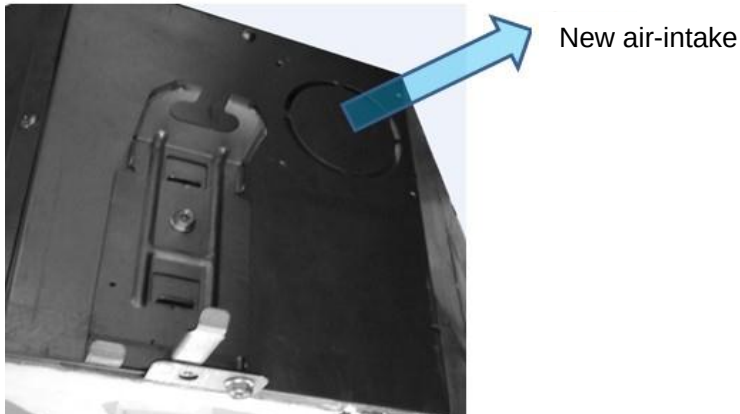
Super Slim Cassette Type

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6. Sound Levels.....	37
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9. Field Wiring	40
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1. Features

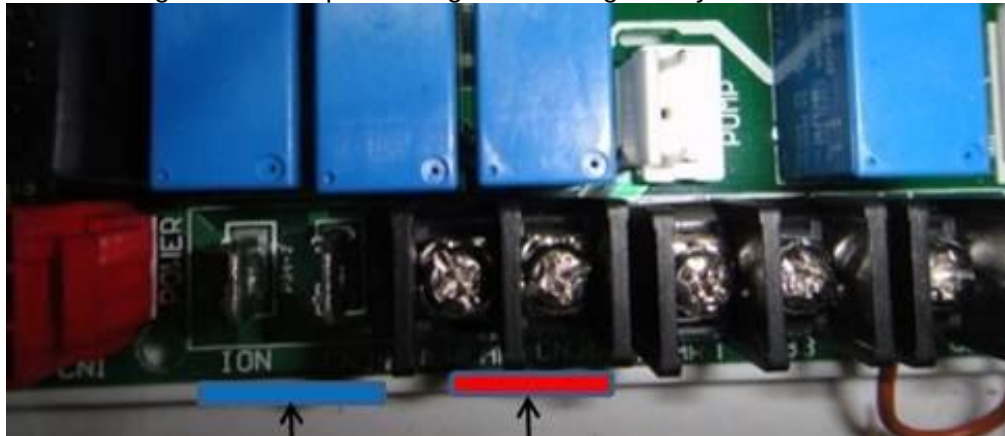
1.1 Fresh air intake function

- Fresh air fulfills air quality more healthy and comfortable.
- Ventilation motor is optional to increase the effect of fresh air.



1.2 Optional ionizer generator

- Ionizer generator is optional to get refreshing air to your room.



Ionizer generator
connector

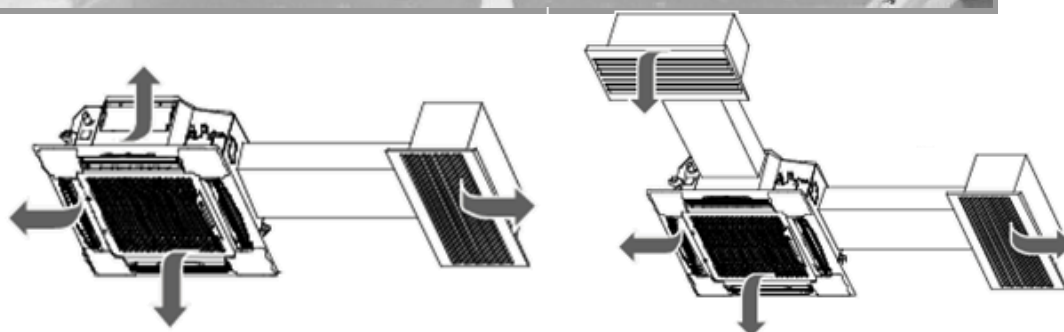
Ventilation motor
connector

- Ionizer can be switched on or off by remote controller. When pressing the Clean Air button on the remote controller, Ionizer will work and the indicator light on display board will shine.



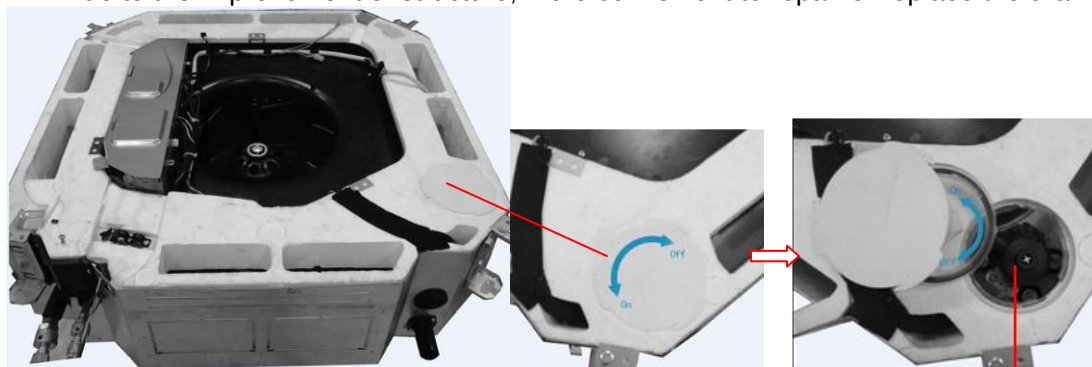
1.3 External air duct design

- Reserve external air duct, more flexible for the air supply.



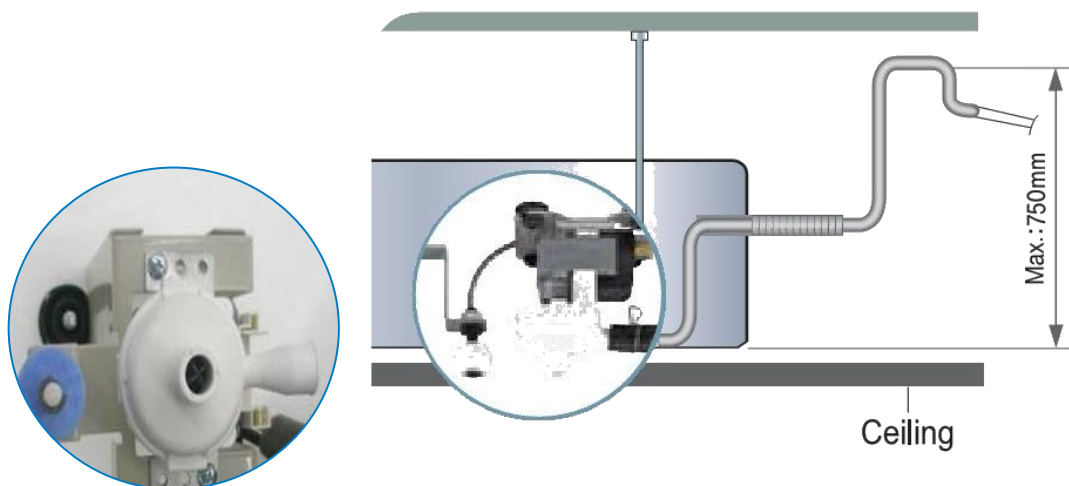
1.4 Built-in draining pump

- Due to the improvement of structure, more convenient to repair or replace the draining pump.



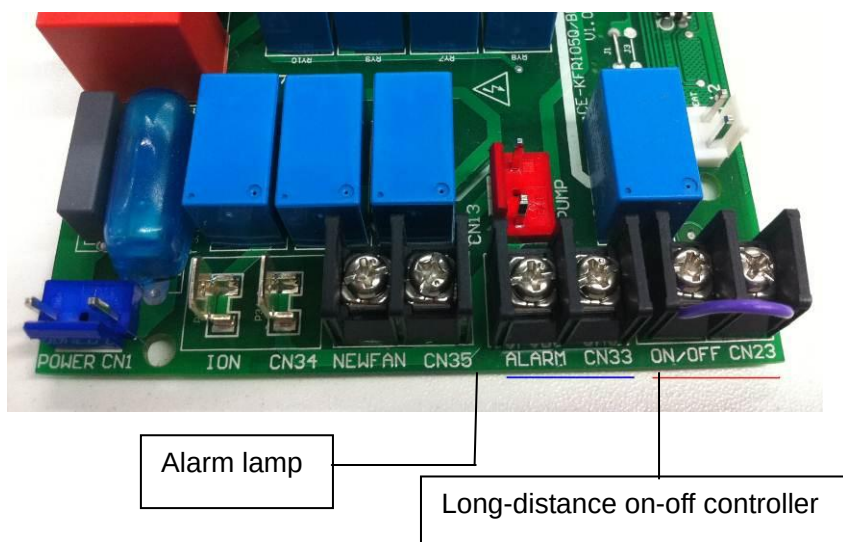
Draining Pump

- Built-in draining pump to make sure condensed water drain out reliably.



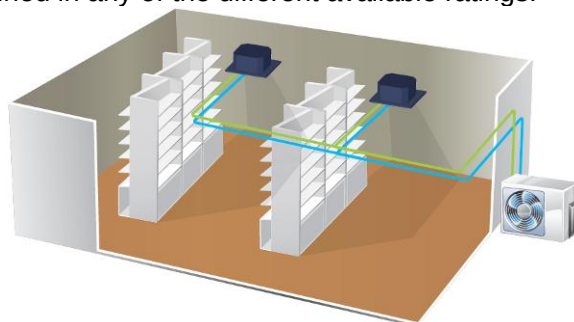
1.5 Terminals for alarm lamp and long-distance on-off controller connection are standard

- Reserve terminals for the connection of alarm lamp and long-distance on-off controller, more human control.

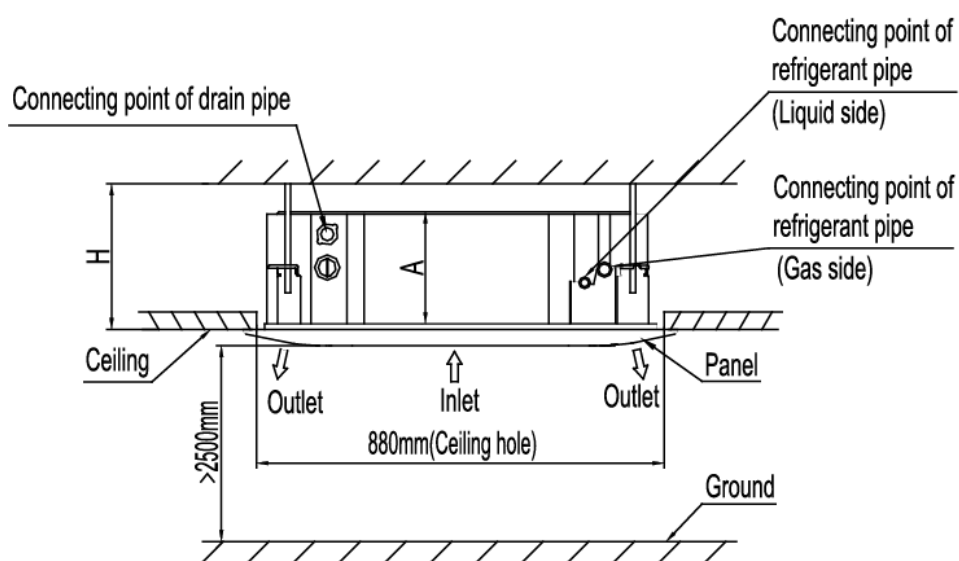
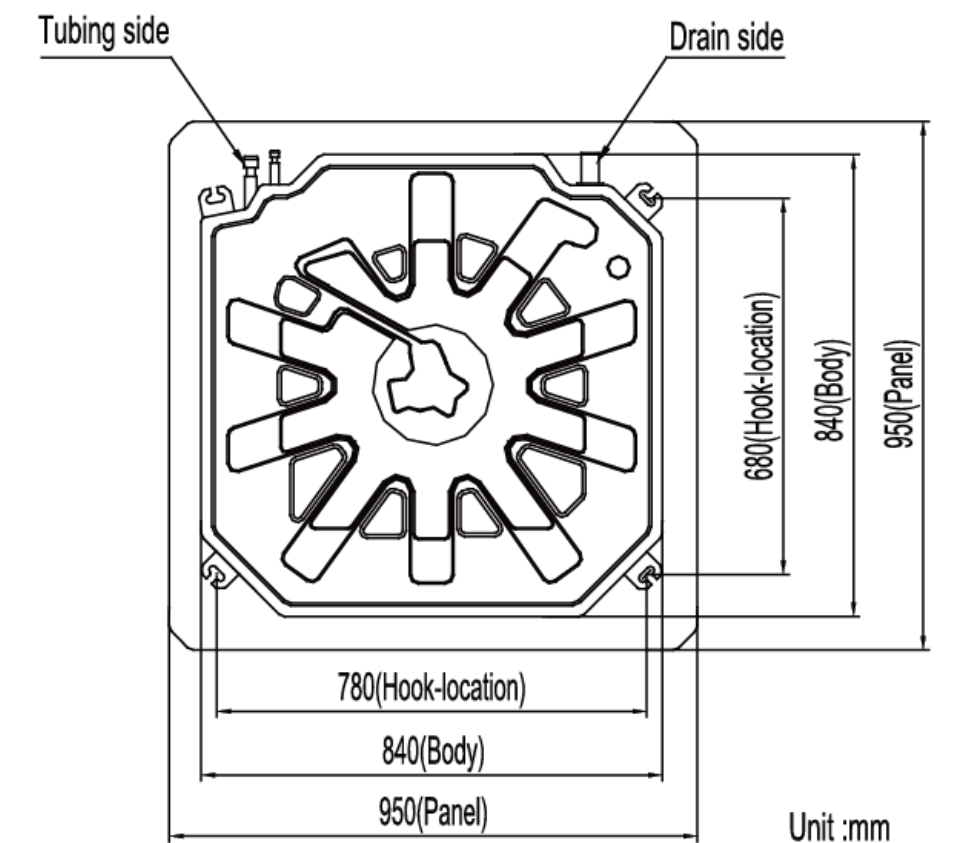


1.6 Twins Combination(24~30K)

- The units can be installed as Twin systems: one outdoor unit can connect with two indoor units. The indoor units can be combined in any of the different available ratings.



2. Dimensions



Model	A	H
AWSI-KBD024-N11	245	>275
AWSI-KBD030-N11	245	>275
AWSI-KBD036-N11	245	>275
AWSI-KBD048-N11	287	>317

3. Service Space

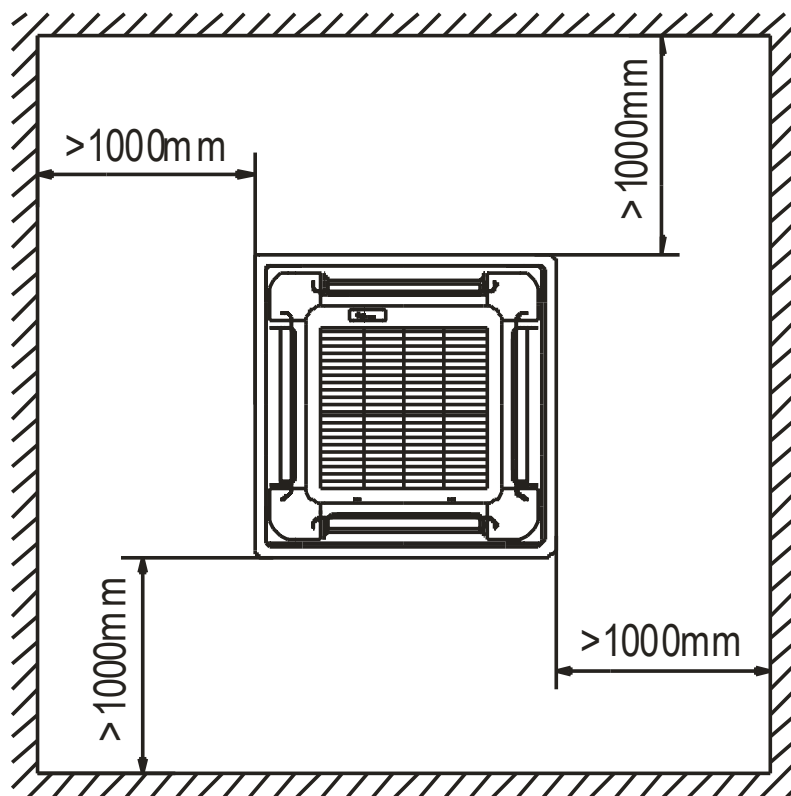
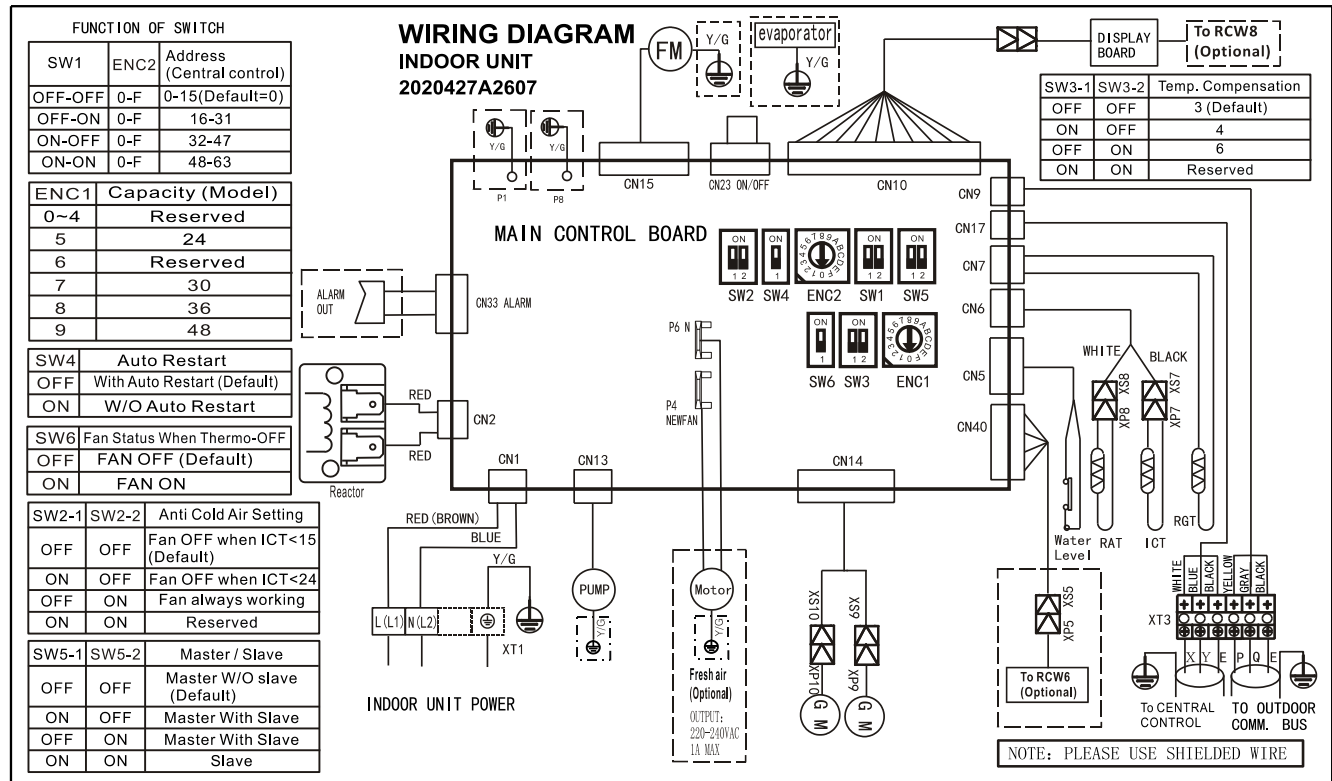


Chart 3

4. Wiring Diagrams

AWSI-KBD024-N11 AWSI-KBD030-N11 AWSI-KBD036-N11 AWSI-KBD048-N11



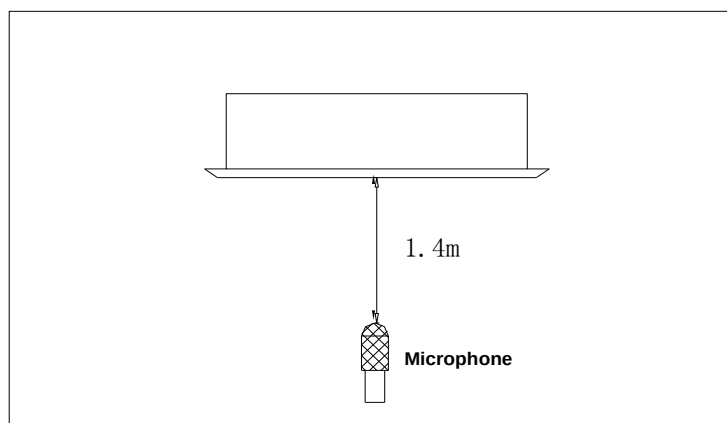
5. Electric Characteristics

Model	Indoor Unit				Power Supply
	Hz	Voltage	Min	Max	MFA
AWSI-KBD024-N11	50	220-240	198	254	10
AWSI-KBD030-N11	50	220-240	198	254	10
AWSI-KBD036-N11	50	220-240	198	254	10
AWSI-KBD048-N11	50	220-240	198	254	10

Notes:

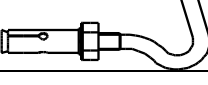
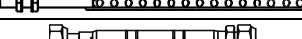
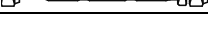
MFA: Max. Fuse Amps. (A)

6. Sound Levels



Model	Noise Power dB(A)	Noise level dB(A)		
		H	M	L
AWSI-KBD024-N11	62	50	57	45
AWSI-KBD030-N11	62	52	48	45
AWSI-KBD036-N11	63	53	49	46
AWSI-KBD048-N11	64	54	50	47

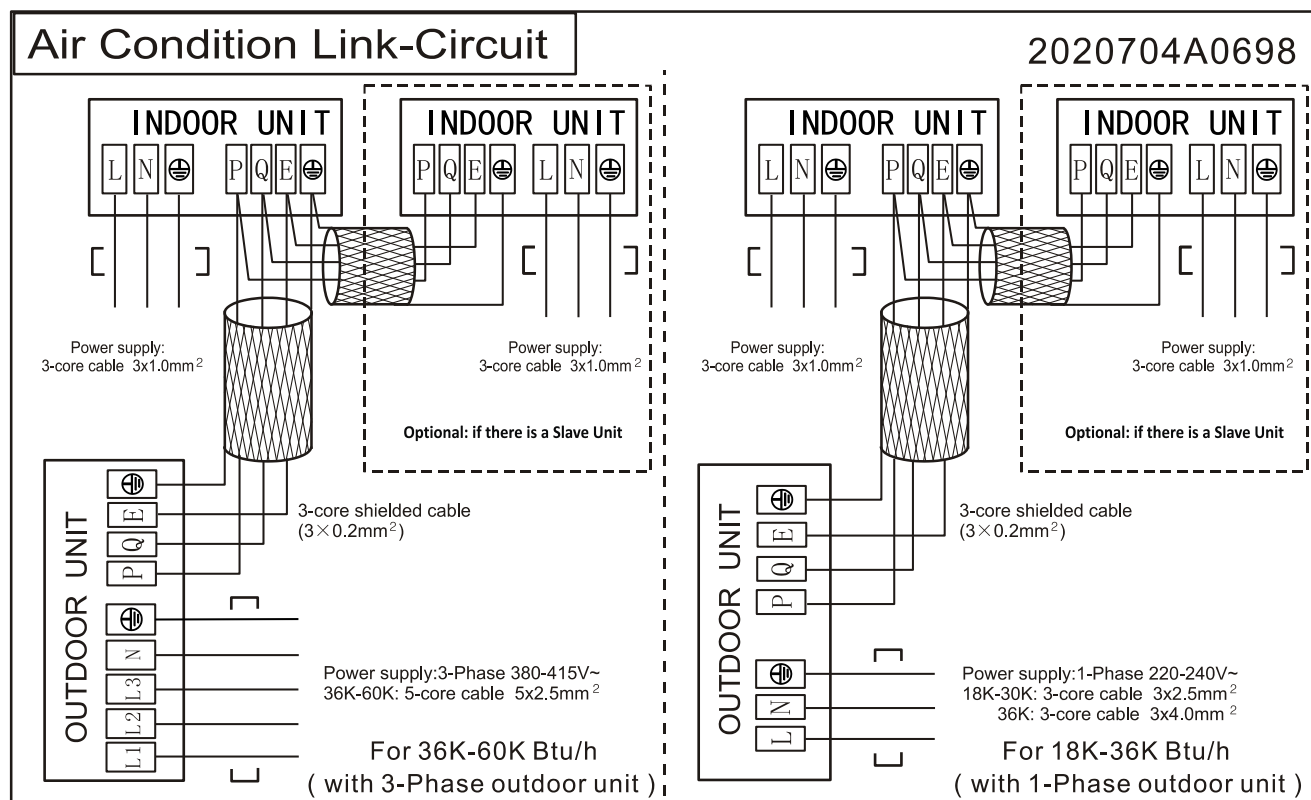
7. Accessories

	Name	Shape	Quantity
Installation Fittings	Installation paper board		1
Tubing & Fittings	Soundproof / insulation sheath		1
Drainpipe Fittings	Out-let pipe sheath		1
	Out-let pipe clasp		1
	Drain joint		1
	Seal ring		1
Remote controller & Its Frame (The product you have might not be provided the following accessories)	Remote controller & Its Frame		1
	Remote controller holder		1
	Mounting screw(ST2.9×10-C-H)		2
	Remote controller manual		1
	Alkaline dry batteries (AM4)		2
Others	Owner's manual		1
	Installation manual		1
Installation accessory (The product you have might not be provided the following accessories)	Expansable hook		4
	Installation hook		4
	Orifice		1

8. The Specification of Power

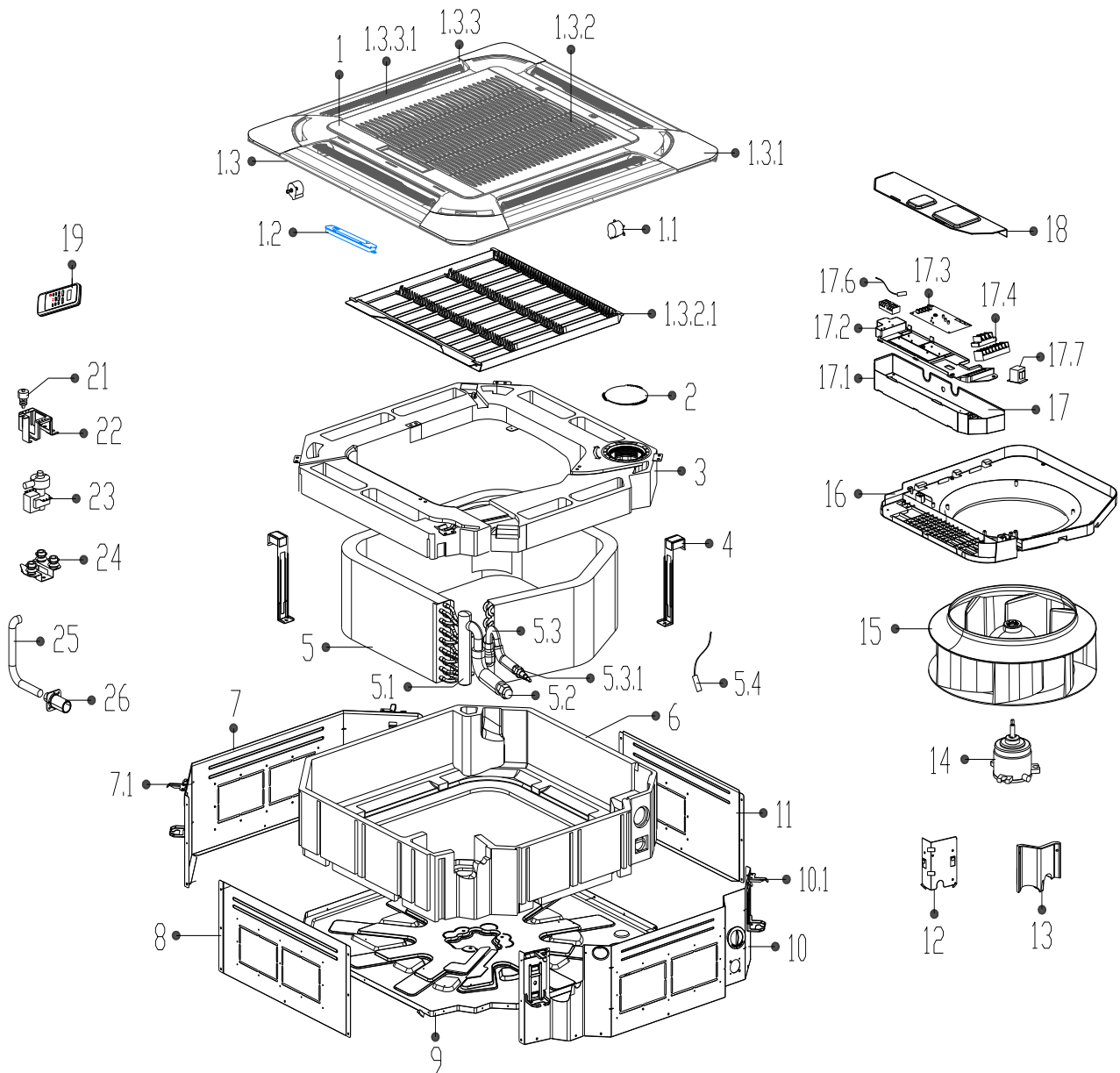
Capacity(Btu/h)		24000	30000	36000	36000	48000
Indoor Unit Power	Phase	1-phase	1-phase	1-phase	1-phase	1-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz
	Power Wiring(mm ²)	3×1.0	3×1.0	3×1.0	3×1.0	3×1.0
	Circuit Breaker/ Fuse (A)	15/10	15/10	15/10	15/10	15/10
Outdoor Unit Power	Phase	1-phase	1-phase	1-phase	3-phase	3-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	380-415V, 50Hz	380-415V, 50Hz
	Power Wiring(mm ²)	3×2.5	3×2.5	3×4.0	5×2.5	5×2.5
	Circuit Breaker/ Fuse (A)	30/20	40/30	40/30	30/20	30/25
Indoor/Outdoor Connecting Wiring(Weak Electric Signal) (mm ²)		3×0.2	3×0.2	3×0.2	3×0.2	3×0.2
Indoor/Outdoor Connecting Wiring(Strong Electric Signal) (mm ²)		————	————	————	————	————

9. Field Wiring



10. Exploded View and Spare Part list

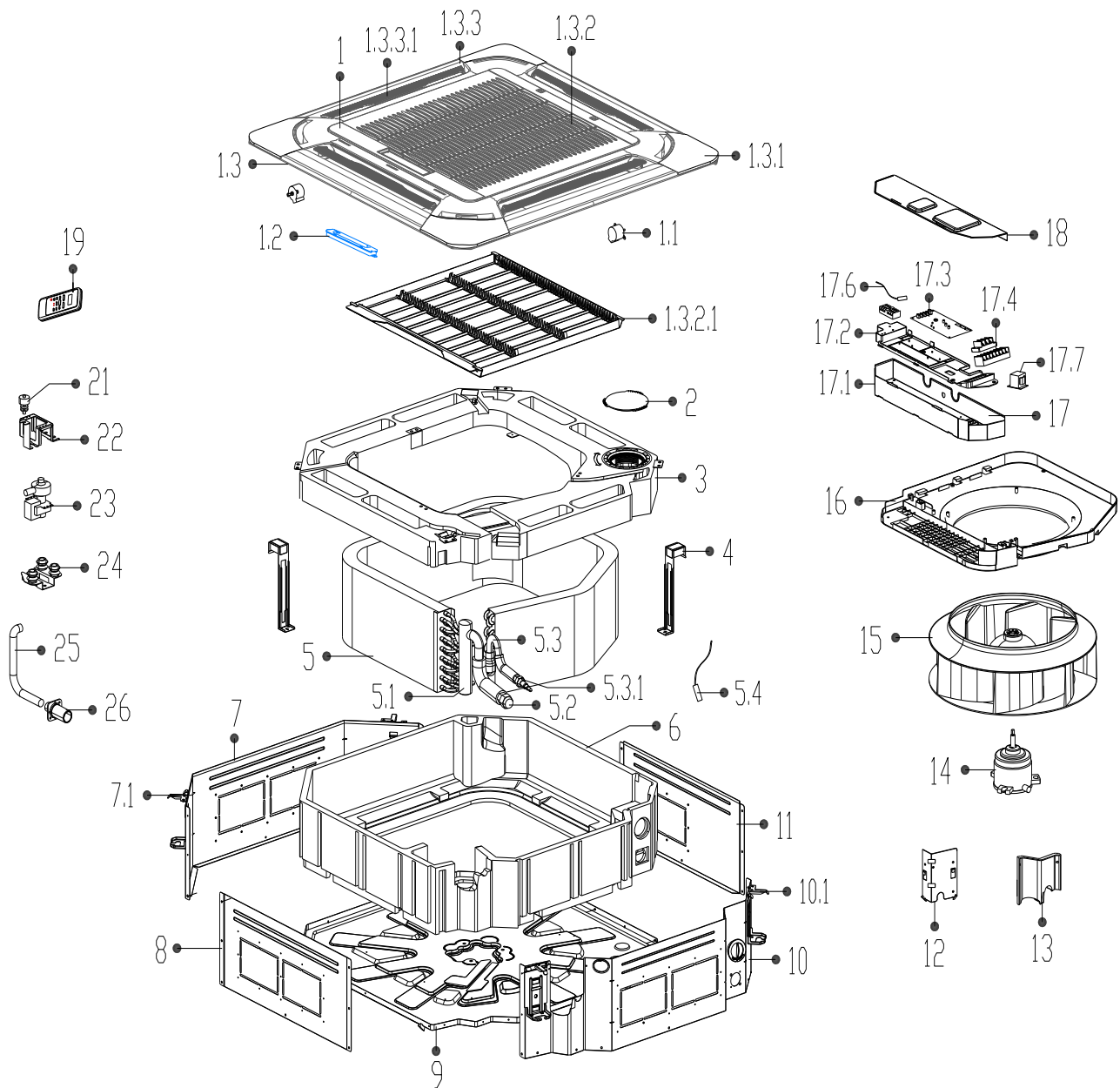
Exploded View of indoor unit:AWSI-KBD024-N11



Spare part list of indoor unit: AWSI-KBD024-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Panel assembly	1	2011099A2561	10.1	Hook	2	P0001115013
1.1	Louver motor	2	202400100007	11	Board assembly IV	1	201242790003
1.2	Display box assembly	1	203342890005	12	Evaporator fixing board	1	201242790011
1.3	Panel assembly	1	P0000449603	13	Pipe fixing board assembly	1	201142790002
1.3.1	Cover assembly of installation plate	4	P0000449698	14	Asynchronous motor	1	202400300529
1.3.2	Air inlet grille assembly	1	P0000449689	15	Fan assembly	1	201100100846
1.3.2.1	Air filter	1	201109901903	16	Ventilation assembly	1	201142790004
1.3.3	Transmission framework	2	P0000449696	17	Electronic control box assembly	1	203342590050
1.3.3.1	Louver	2	P0000449731	17.1	Electronic control box	1	201242590004
2	Cover	1	201142790001	17.2	Insulation plate	1	201142590002
3	Foam tray assembly for condenser water	1	202242790002	17.3	Main control board assembly	1	201342591519
4	Evaporator fixing hanger	2	201242790008	17.4	Wire joint	1	202301450125
5	Evaporator assembly	1	201542790048	17.4	Wire joint	1	202301450116
5.1	Output pipe assembly	1	201642790041	17.6	Ambient temperature sensor assembly	1	202440120100
5.2	Copper nut	1	201600320003	17.7	Reactance	1	202301000950
5.3	Input pipe assembly	1	201642790043	18	Cover of electronic control box I	1	201242590023
5.3.1	Copper nut	1	201600320001	19	Remote controller	1	203355091552
5.4	Pipe temperature sensor assembly	1	202301300804	21	Water level sensor assembly	1	202301310095
5.4	Pipe temperature sensor assembly	1	202440500004	22	Water Pump installation bracket	1	201242990003
6	Base foam assembly	1	202242790001	23	Drain pump	1	202400600203
7	Board assembly III	1	201242790007	24	Pump rubber washer	3	202742000002
7.1	Hook	2	P0001115013	25	Drain pipe	1	202856001093
8	Board assembly I	1	201242790004	25	Drain pipe	1	202742590002
9	Chassis assembly	1	201242590012	26	Water pipe	1	201142500032
10	Board assembly II	1	201242790009				

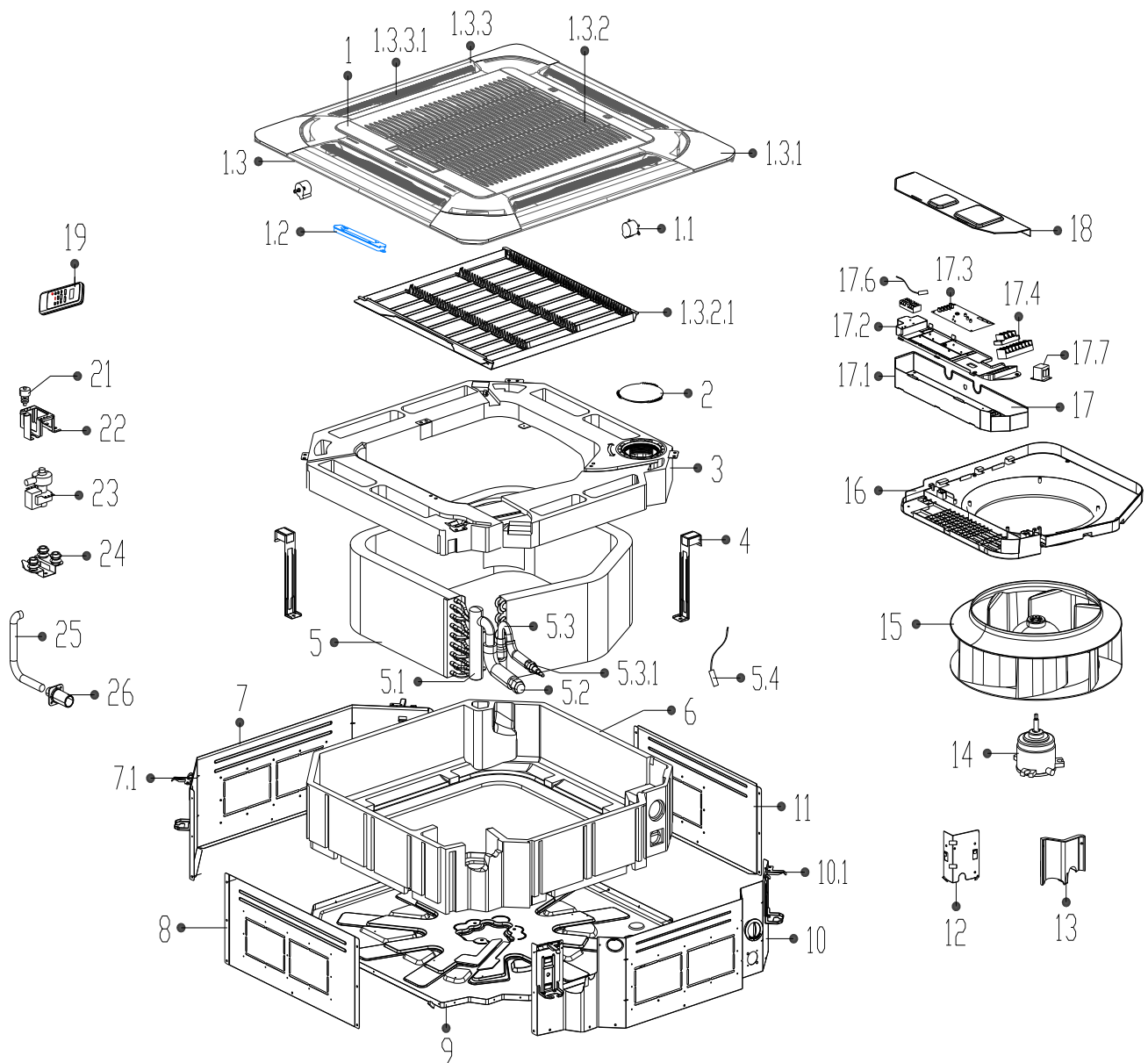
Exploded View of indoor unit:AWSI-KBD030-N11



Spare part list of indoor unit: AWSI-KBD030-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Panel assembly	1	2011099A2561	10.1	Hook	2	P0001115013
1.1	Louver motor	2	202400100007	11	Board assembly IV	1	201242790003
1.2	Display box assembly	1	203342890005	12	Evaporator fixing board	1	201242790011
1.3	Panel assembly	1	P0000449603	13	Pipe fixing board assembly	1	201142790002
1.3.1	Cover assembly of installation plate	4	P0000449698	14	Asynchronous motor	1	202400300529
1.3.2	Air inlet grille assembly	1	P0000449689	15	Fan assembly	1	201100100846
1.3.2.1	Air filter	1	201109901903	16	Ventilation assembly	1	201142790004
1.3.3	Transmission framework	2	P0000449696	17	Electronic control box assembly	1	203342590050
1.3.3.1	Louver	2	P0000449731	17.1	Electronic control box	1	201242590004
2	Cover	1	201142790001	17.2	Insulation plate	1	201142590002
3	Foam tray assembly for condenser water	1	202242790002	17.3	Main control board assembly	1	201342591519
4	Evaporator fixing hanger	2	201242890006	17.4	Wire joint	1	202301450125
5	Evaporator assembly	1	201542890054	17.4	Wire joint	1	202301450116
5.1	Output pipe assembly	1	201642890046	17.6	Ambient temperature sensor assembly	1	202440120100
5.2	Copper nut	1	201600320003	17.7	Reactance	1	202301000950
5.3	Input pipe assembly	1	201642890048	18	Cover of electronic control box I	1	201242590023
5.3.1	Copper nut	1	201600320001	19	Remote controller	1	203355091552
5.4	Pipe temperature sensor assembly	1	202301300804	21	Water level sensor assembly	1	202301310095
5.4	Pipe temperature sensor assembly	1	202440500004	22	Water Pump installation bracket	1	201242990003
6	Base foam assembly	1	202242790001	23	Drain pump	1	202400600203
7	Board assembly III	1	201242790007	24	Pump rubber washer	3	202742000002
7.1	Hook	2	P0001115013	25	Drain pipe	1	202856001093
8	Board assembly I	1	201242790004	25	Drain pipe	1	202742590002
9	Chassis assembly	1	201242590012	26	Water pipe	1	201142500032
10	Board assembly II	1	201242790009				

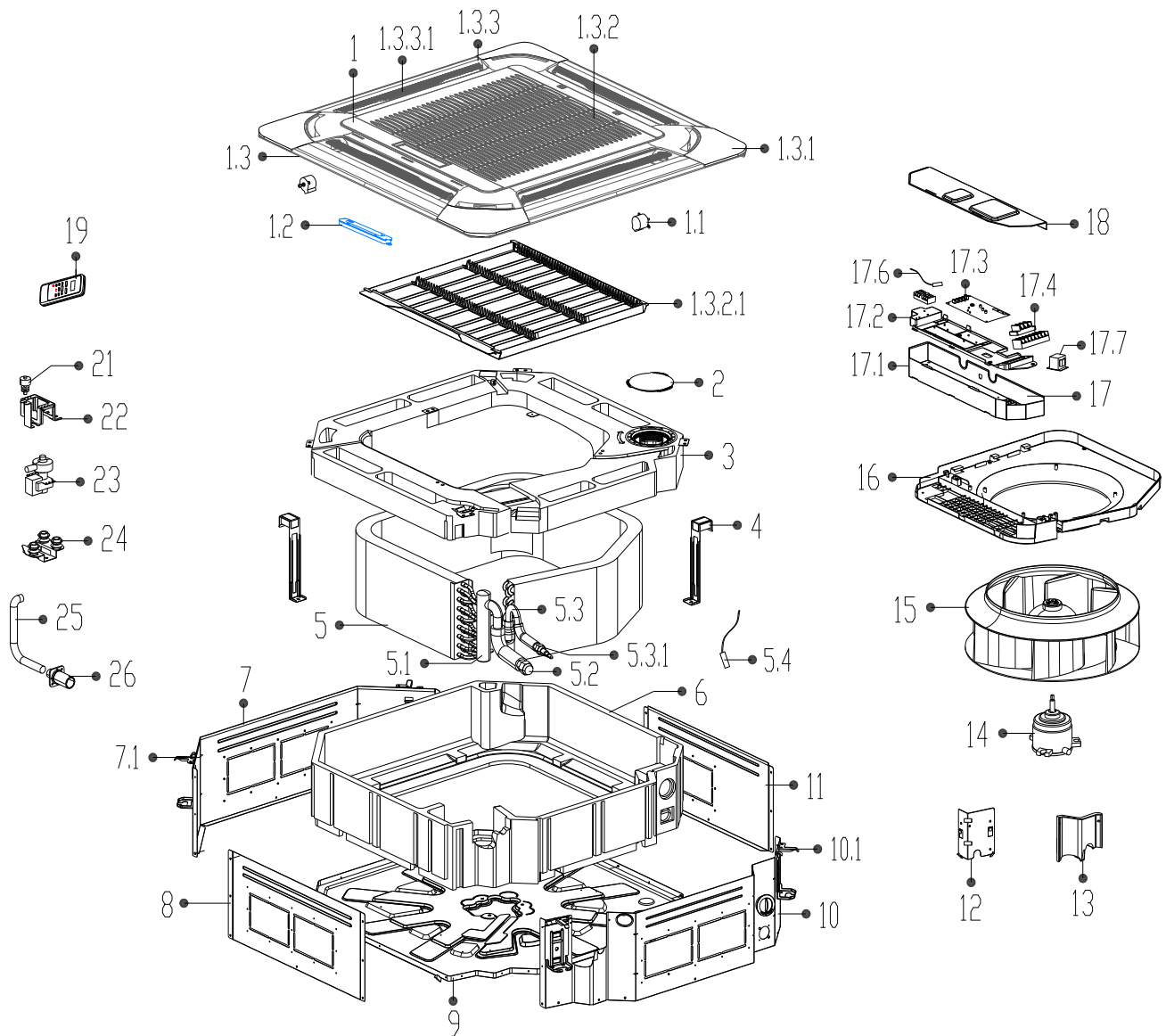
Exploded View of indoor unit:AWSI-KBD036-N11



Spare part list of indoor unit: AWSI-KBD036-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Panel assembly	1	2011099A2561	10.1	Hook	2	P0001115013
1.1	Louver motor	2	202400100007	11	Board assembly IV	1	201242790003
1.2	Display box assembly	1	203342890005	12	Evaporator fixing board	1	201242790011
1.3	Panel assembly	1	P0000449603	13	Pipe fixing board assembly	1	201142790002
1.3.1	Cover assembly of installation plate	4	P0000449698	14	Asynchronous motor	1	202400300529
1.3.2	Air inlet grille assembly	1	P0000449689	15	Fan assembly	1	201100100846
1.3.2.1	Air filter	1	201109901903	16	Ventilation assembly	1	201142790004
1.3.3	Transmission framework	2	P0000449696	17	Electronic control box assembly	1	203342590050
1.3.3.1	Louver	2	P0000449731	17.1	Electronic control box	1	201242590004
2	Cover	1	201142790001	17.2	Insulation plate	1	201142590002
3	Foam tray assembly for condenser water	1	202242790002	17.3	Main control board assembly	1	201342591519
4	Evaporator fixing hanger	2	201242890006	17.4	Wire joint	1	202301450125
5	Evaporator assembly	1	201542890054	17.4	Wire joint	1	202301450116
5.1	Output pipe assembly	1	201642890046	17.6	Ambient temperature sensor assembly	1	202440120100
5.2	Copper nut	1	201600320003	17.7	Reactance	1	202301000950
5.3	Input pipe assembly	1	201642890048	18	Cover of electronic control box I	1	201242590023
5.3.1	Copper nut	1	201600320001	19	Remote controller	1	203355091552
5.4	Pipe temperature sensor assembly	1	202301300804	21	Water level sensor assembly	1	202301310095
5.4	Pipe temperature sensor assembly	1	202440500004	22	Water Pump installation bracket	1	201242990003
6	Base foam assembly	1	202242790001	23	Drain pump	1	202400600203
7	Board assembly III	1	201242790007	24	Pump rubber washer	3	202742000002
7.1	Hook	2	P0001115013	25	Drain pipe	1	202856001093
8	Board assembly I	1	201242790004	25	Drain pipe	1	202742590002
9	Chassis assembly	1	201242590012	26	Water pipe	1	201142500032
10	Board assembly II	1	201242790009				

Exploded View of indoor unit:AWSI-KBD048-N11



Spare part list of indoor unit: AWSI-KBD048-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Panel assembly	1	2011099A2561	10.1	Hook	2	P0001115013
1.1	Louver motor	2	202400100007	11	Board assembly IV	1	201242990036
1.2	Display box assembly	1	203342890005	12	Evaporator fixing board	1	201242790011
1.3	Panel assembly	1	P0000449603	13	Pipe fixing board assembly	1	201142790002
1.3.1	Cover assembly of installation plate	4	P0000449698	14	Asynchronous motor	1	202400300529
1.3.2	Air inlet grille assembly	1	P0000449689	15	Fan assembly	1	201100100846
1.3.2.1	Air filter	1	201109901903	16	Ventilation assembly	1	201142990003
1.3.3	Transmission framework	2	P0000449696	17	Electronic control box assembly	1	203342590050
1.3.3.1	Louver	2	P0000449731	17.1	Electronic control box	1	201242590004
2	Cover	1	201142790001	17.2	Insulation plate	1	201142590002
3	Foam tray assembly for condenser water	1	202242790002	17.3	Main control board assembly	1	201342591519
4	Evaporator fixing hanger	2	201242990039	17.4	Wire joint	1	202301450125
5	Evaporator assembly	1	201542990025	17.4	Wire joint	1	202301450116
5.1	Output pipe assembly	1	201642990044	17.6	Ambient temperature sensor assembly	1	202440120100
5.2	Copper nut	1	201600320003	17.7	Reactance	1	202301000950
5.3	Input pipe assembly	1	201642990006	18	Cover of electronic control box I	1	201242590023
5.3.1	Copper nut	1	201600320001	19	Remote controller	1	203355091552
5.4	Pipe temperature sensor assembly	1	202301300804	21	Water level sensor assembly	1	202301310095
5.4	Pipe temperature sensor assembly	1	202440500004	22	Water Pump installation bracket	1	201242990003
6	Base foam assembly	1	202242990004	23	Drain pump	1	202400600203
7	Board assembly III	1	201242990035	24	Pump rubber washer	3	202742000002
7.1	Hook	2	P0001115013	25	Drain pipe	1	202856001093
8	Board assembly I	1	201242990034	25	Drain pipe	1	202742590002
9	Chassis assembly	1	201242590012	26	Water pipe	1	201142500032
10	Board assembly II	1	201242990037				

Duct Type

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1. Features

AWSI-DCD024-N11, AWSI-OCD030-N11, AWSI-OCD036-N11, AWSI-OCD048-N11

1.1 Installation accessories: (Optional)

- Front Board, Canvas Air Passage, Filter, Panel, for easy installation



Front Board



Canvas Air Passage



Filter



Panel

1.2 Easy Installation: Two air inlet styles (Bottom side or Rear side)

- Air inlet from rear is standard for all capacity; air inlet from bottom is optional.
- The size of air inlet frame from rear and bottom is same, it's very easy to move the cover from bottom to rear side, or from rear to the bottom, in order to matching the installation condition.



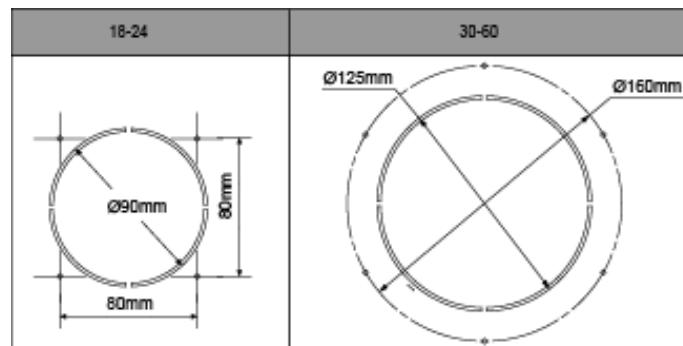
Air intake from rear (Standard)



Air intake from bottom (Optional)

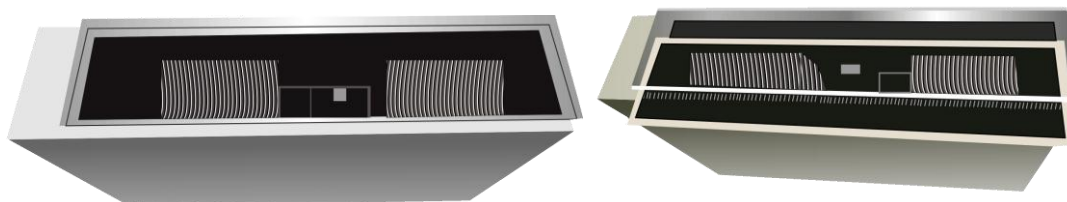
1.3 Fresh air intake function

- Install one duct from the reserved fresh-air intake to outdoor. Continually inhale the fresh air to improve the quality of the indoor air, fulfills air quality more healthy and comfortable.

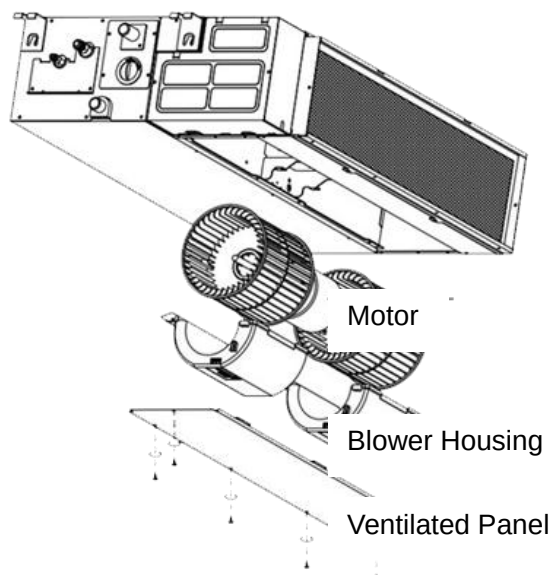


1.4 Easy maintenance

- Clean the filter (Optional, standard product without filter)
It is easy to draw out the filter from the indoor unit for cleaning, even the filter is installed in rear side or bottom side.

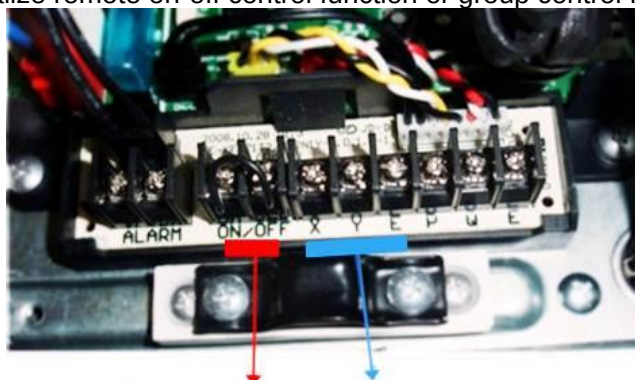


- Replace the motor or centrifugal fan
Remove the ventilated panel firstly. Remove a half of blower housing and take out the motor with centrifugal fan. Directly remove two bolts, and then replace the motor or centrifugal fan easily.



1.5 Reserved remote on-off and central control ports

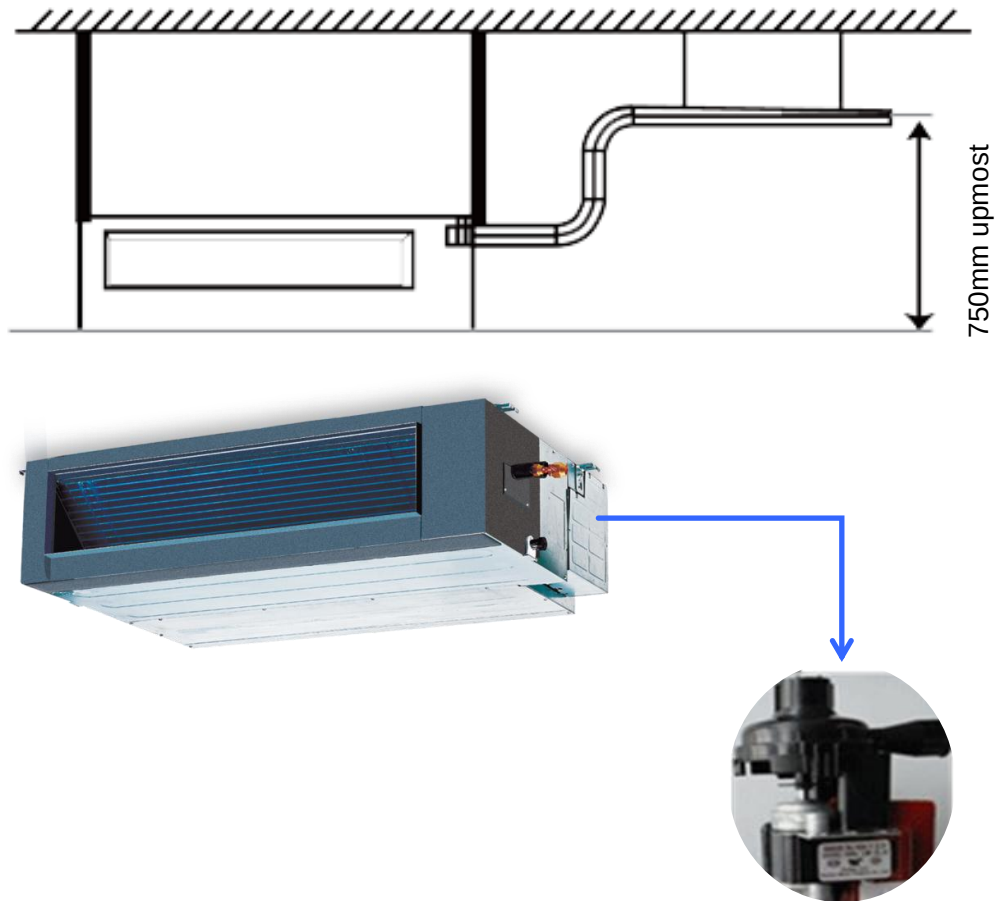
- Reserved remote on-off ports and central control ports, can connect the cable of an on-off controller or a central controller to realize remote on-off control function or group control function.



Remote on-off ports Central control ports

1.6 Built-in drain pump (Optional):

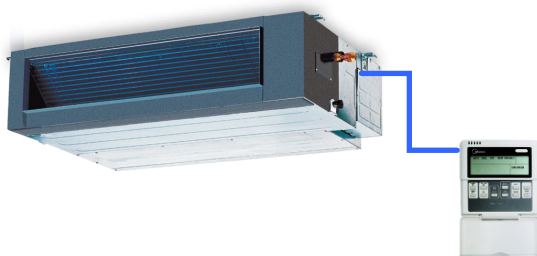
- Built-in drain pump can lift the water to 750mm upmost. It's convenient to install drainage piping under most space condition.



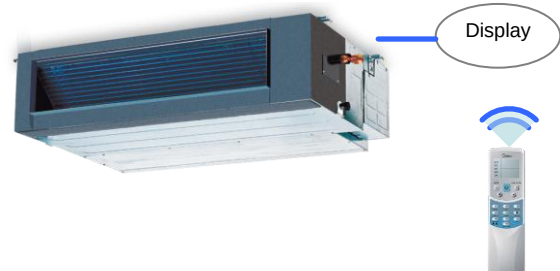
1.7 Built-in display board

- The standard indoor unit can be controlled by wired controller.
- There is a display board with a receiver in the E-box. Move out the display, and fix it in other place, even in the distance of 10m. The unit will realized remoter control.
- The wired controller and the display board can display the error code or production code when the chips detect some failure.

Wired Controller (Standard)

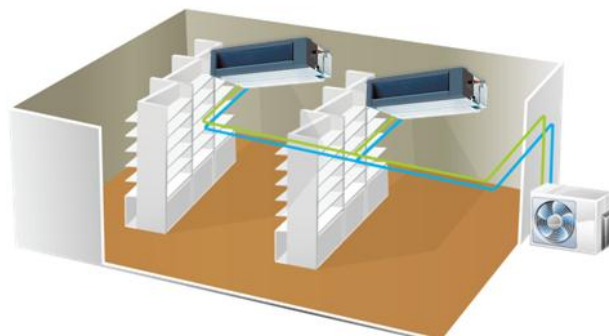


Remote Controller (Optional)



1.8 Twins Combination

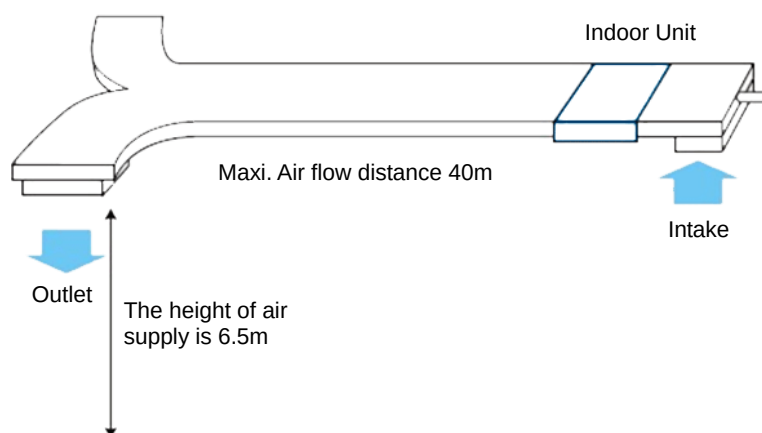
- The units can be installed as Twin systems: one outdoor unit can connect with two indoor units. The indoor units can be combined in any of the different available ratings.



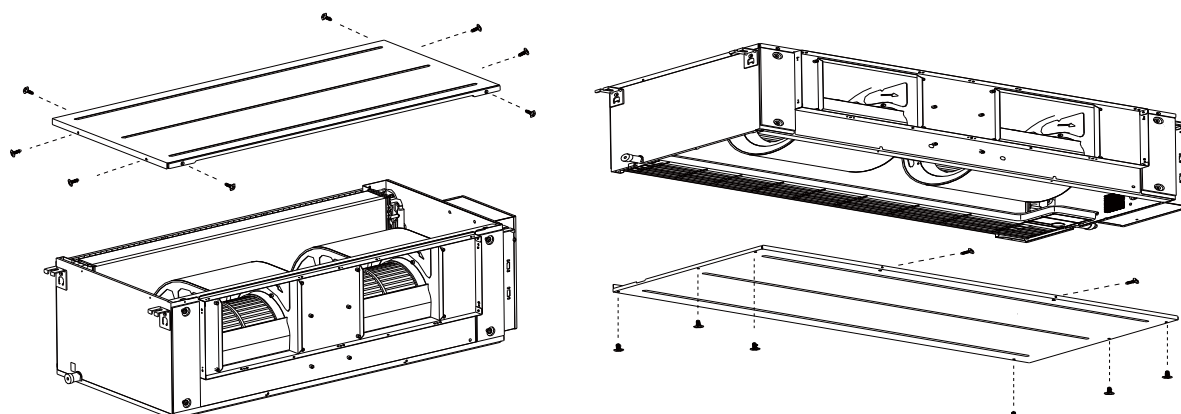
AWSI-OCD060-N11**1.1 High static pressure design**

- Max static pressure of indoor unit is 200Pa.
- The longest distance of air supply is 40m, the max height of air supply is 6.5m.
- Specially recommended for spacious and large rooms like large stores and factories.

High static pressure design enables long duct.

**1.2 Easy maintenance**

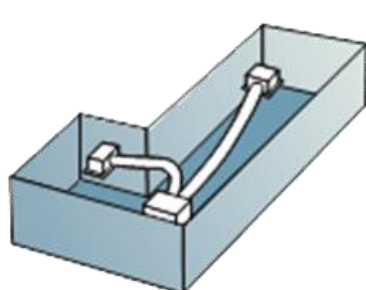
- The unit can be opened from top or bottom.



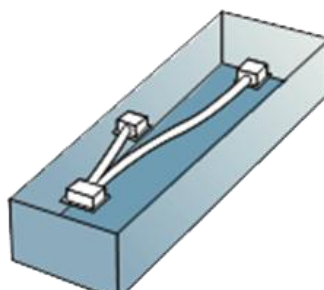
- The air outlet flange is isolated from either top panel or base panel, which makes the maintenance much easier when connecting duct.

1.3 Flexible Installation

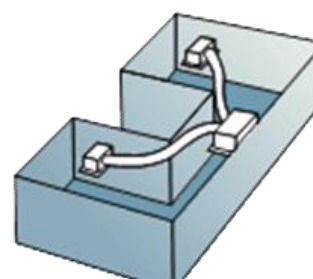
- Different solutions for any shape room by using kinds of air distribution ducts.



L-shaped



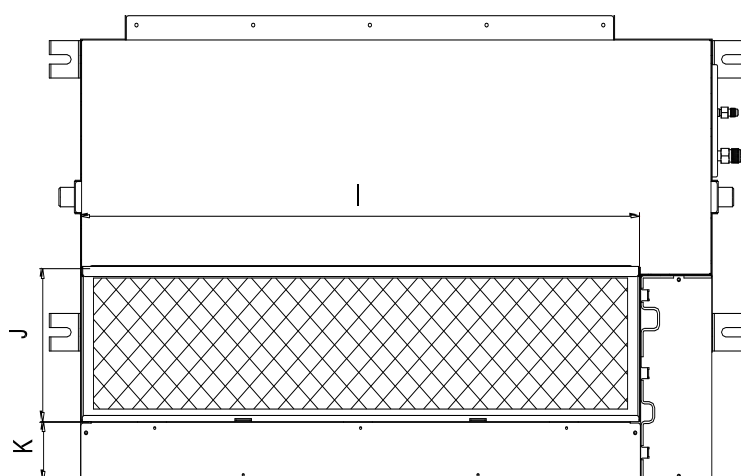
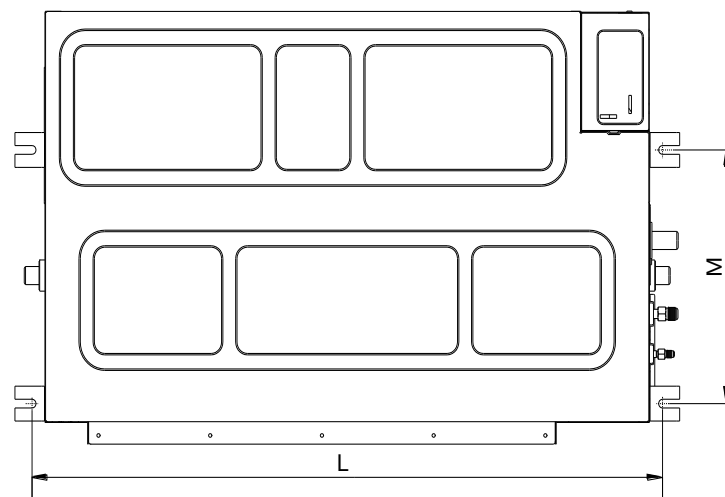
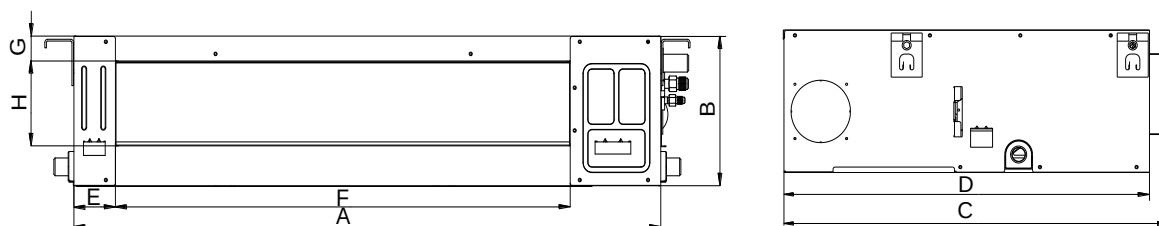
Areas far apart



Y-shaped

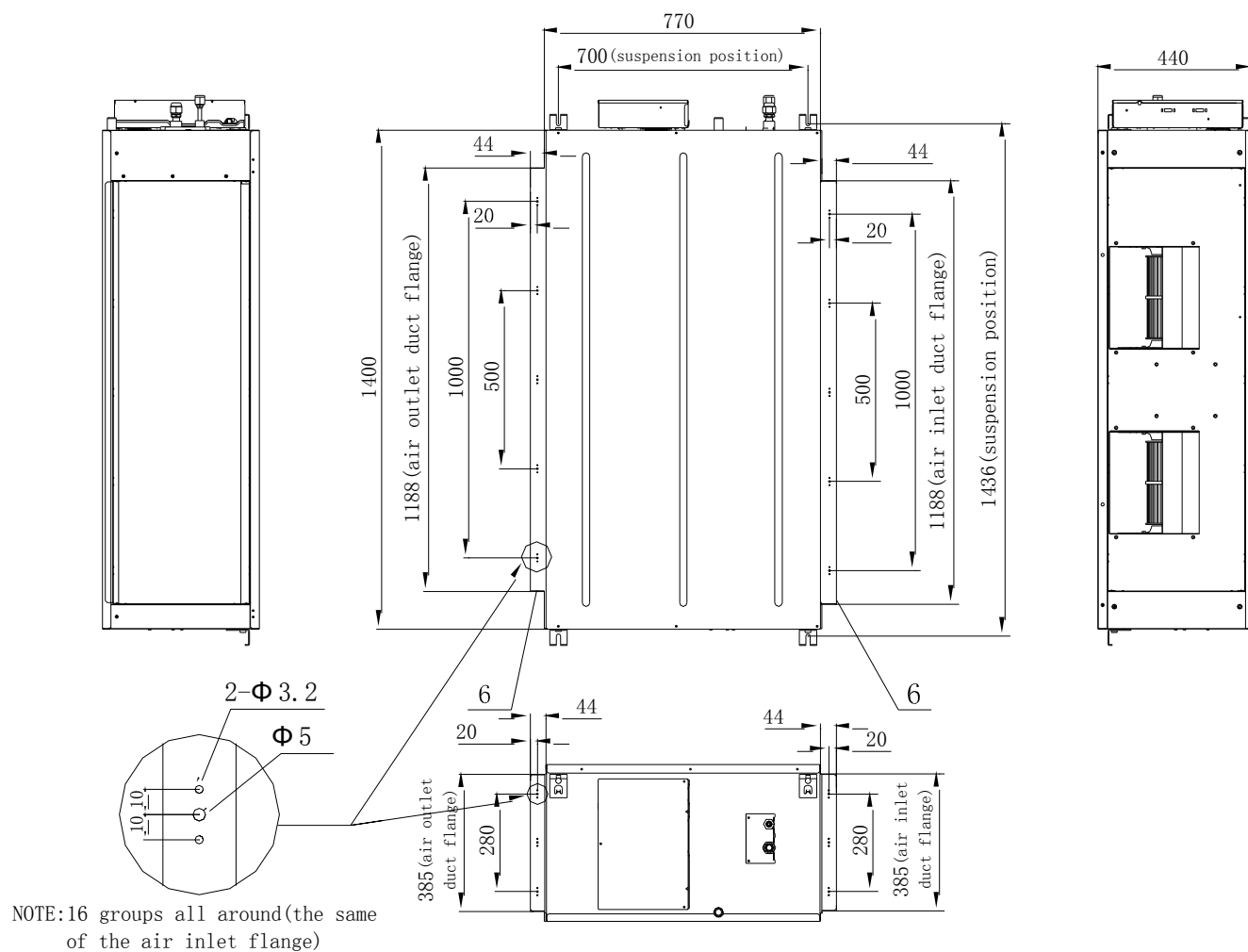
2. Dimensions

AWSI-OCD012-N11,AWSI-OCD018-N11,AWSI-OCD024-N11,AWSI-OCD030-N11,AWSI-OCD036-N11, AWSI-OCD048-N11



Model	Outline dimension(mm)				Air outlet opening size				Air return opening size			Size of outline dimension mounted plug	
	A	B	C	D	E	F	G	H	I	J	K	L	M
AWSI-OCD012-N11	700	210	635	570	65	493	35	119	595	200	80	740	350
AWSI-OCD018-N11	920	270	635	570	65	713	35	179	815	260	20	960	350
AWSI-OCD024-N11	920	270	635	570	65	713	35	179	815	260	20	960	350
AWSI-OCD030-N11	1140	270	775	710	65	933	35	179	1035	260	20	1180	490
AWSI-OCD036-N11	1140	270	775	710	65	933	35	179	1035	260	20	1180	490
AWSI-OCD048-N11	1200	300	865	800	80	968	40	204	1094	288	45	1240	500

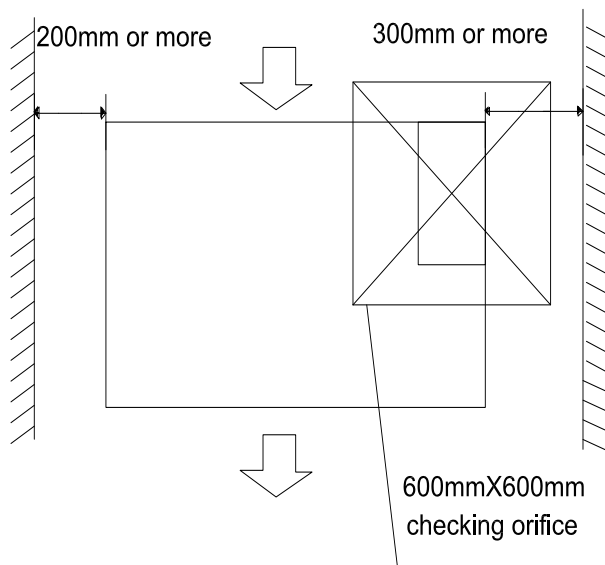
AWSI-OCD060-N11



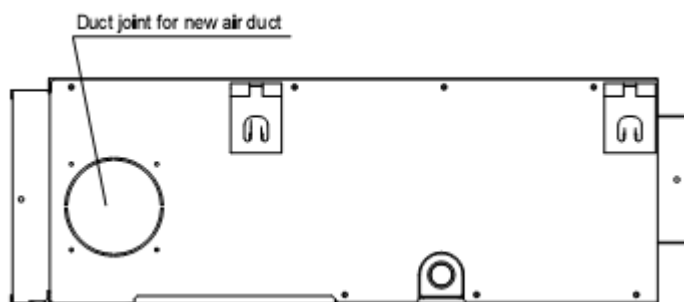
3. Service Space

AWSI-OCD012-N11,AWSI-OCD018-N11,AWSI-OCD024-N11,AWSI-OCD030-N11,AWSI-OCD036-N11, AWSI-OCD048-N11

Ensure enough space required for installation and maintenance.



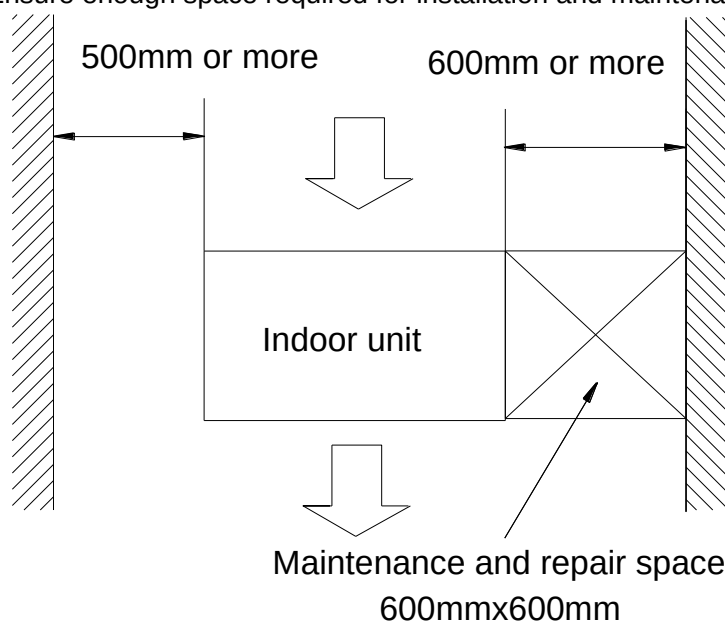
All the indoor units reserve the hole to joint the fresh air pipe. The hole size as following:



MODLE	
12-24	30-60
Ø90mm 80mm	Ø125mm Ø160mm

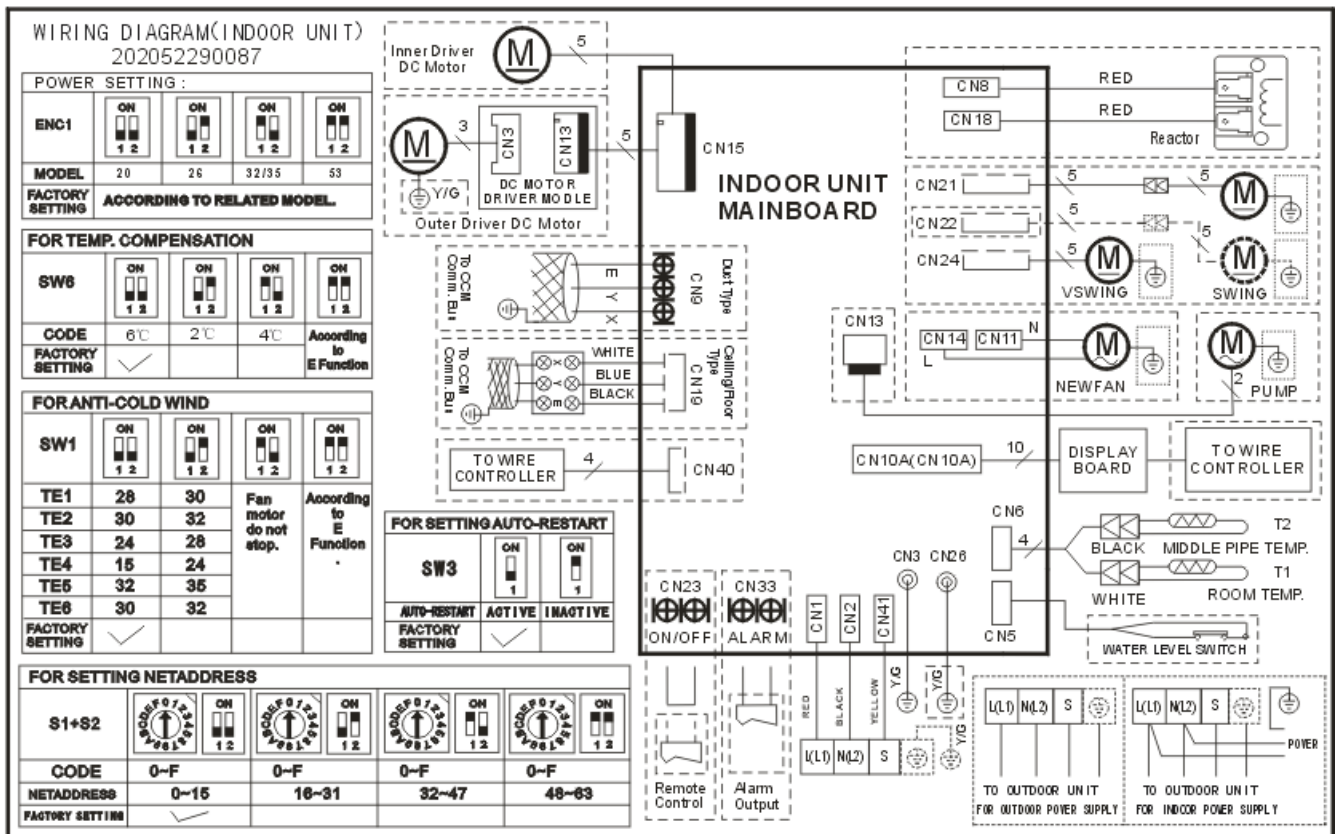
AWSI-OCD060-N11

Ensure enough space required for installation and maintenance.

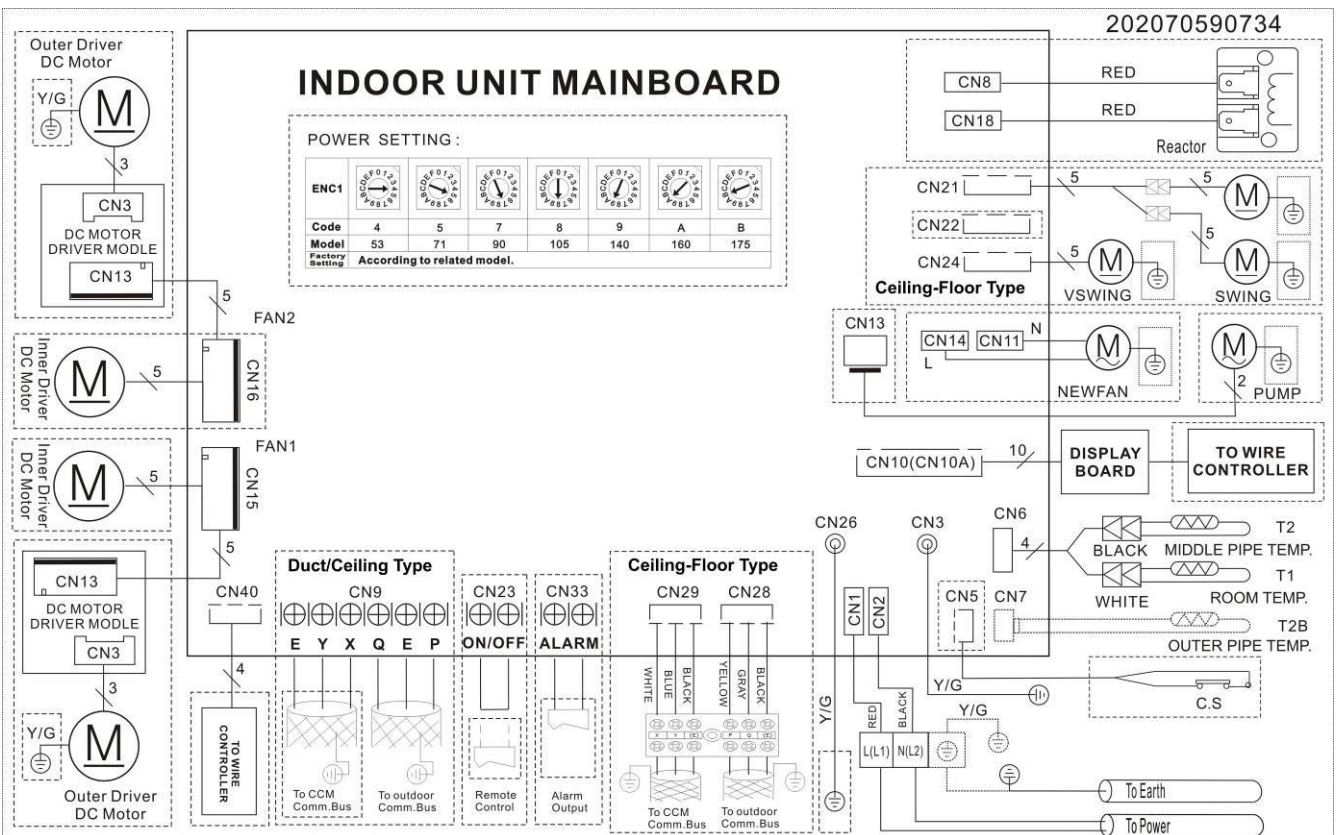


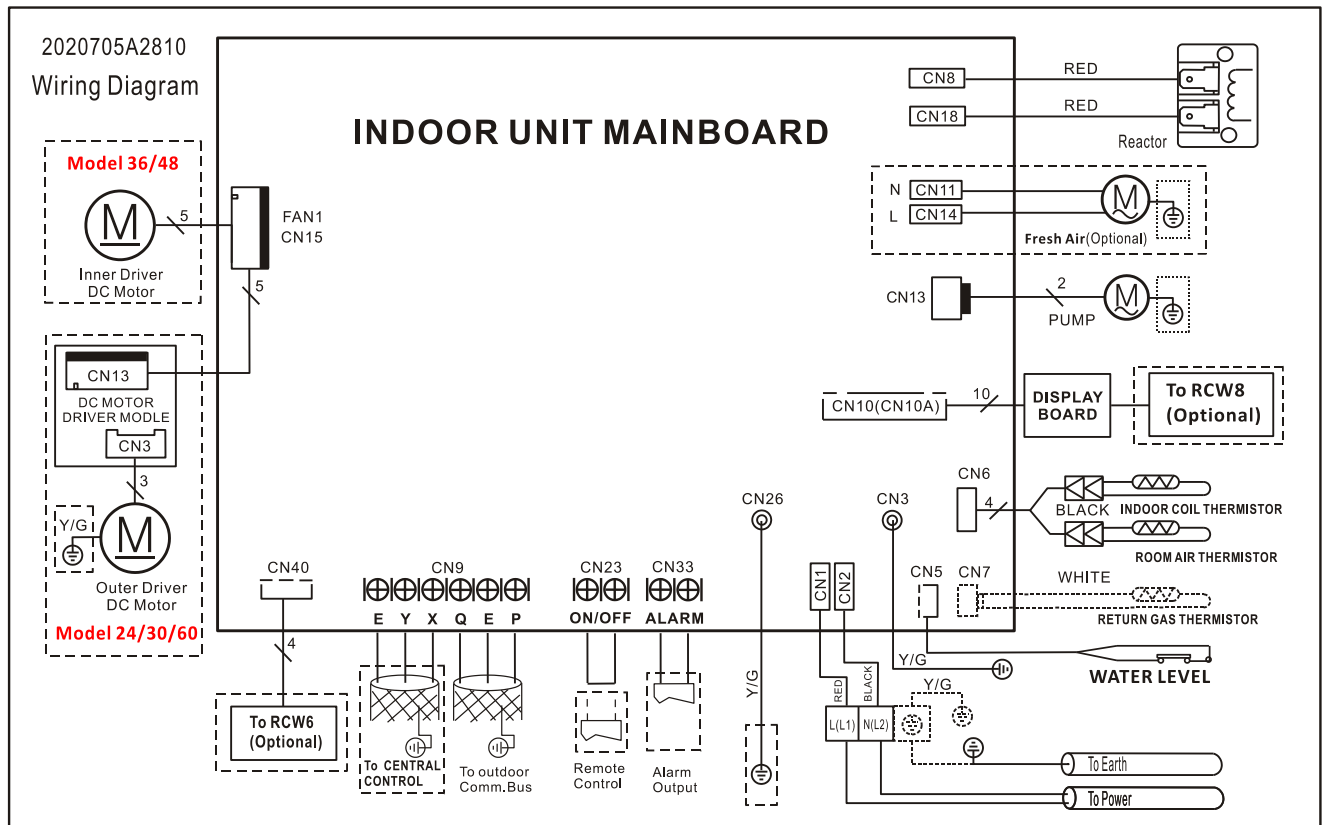
4. Wiring Diagrams

AWSI-OCD012-N11



AWSI-OCD018-N11





AWSI-OCD012-N11, AWSI-OCD018-N11

FOR SETTING POWER							FOR MAIN-SLAVE SETTING				
ENC1							SW1				
CODE	4	5	7	8	9	A	MODE	MAIN NO SLAVE	MAIN	MAIN	SLAVE
Power	53	71	90	105	140	160	FACTORY SETTING	☒			
FACTORY SETTING: ACCORDING TO RELATED MODEL.											
FOR SETTING NETADDRESS							FOR SETTING FAN MOTOR CONTROL THEN NO POWER REQUEST				
S1+S2							SW2				
CODE	0~F	0~F	0~F	0~F	0~F	0~F	MODE	FAN OFF	FAN ON		
NETADDRESS	0~15	16~31	32~47	48~63			FACTORY SETTING	☒			
FACTORY SETTING	☒										
FOR SETTING STATIC PRESSURE							FOR TEMP. COMPENSATION				
ENC2							SW6				
Code	0	1	2	3	4		DUCT TYPE	3℃	4℃	6℃	
HIGH STATIC PRESSURE	0~50	51~80	81~120	121~150	>150		CEILING AND FLOOR TYPE	1℃	4℃	6℃	According to E Function
MIDDLE STATIC PRESSURE	0~25	26~37	38~50	51~100	>100		FOR SETTING CEILING TYPE OR FLOOR TYPE	FLOOR TYPE	CEILING TYPE		
FACTORY SETTING	☒						FACTORY SETTING	☒			
FOR SETTING AUTO-RESTART							202070290383 FUNCTION SETTING INDICATION				
SW3											
AUTO-RESTART	ACTIVE	INACTIVE									
FACTORY SETTING	☒										

AWSI-OCD024-N11 AWSI-OCD030-N11 AWSI-OCD036-N11

ENC2	Middle Static Pressure	High Static Pressure
0	0-25(Default)	0-50(Default)
1	26-37	51-80
2	38-50	81-120
3	51-100	121-150
4	>100	>150

ENC1	Capacity (Model)
0~4	Reserved
5	24
6	Reserved
7	30
8	36
9	48
A	60

S1(1-2)	S2	Address (Central control)
OFF-OFF	0-F	0-15(Default=0)
OFF-ON	0-F	16-31
ON-OFF	0-F	32-47
ON-ON	0-F	48-63

SW1-1	SW1-2	Master/Slave
OFF	OFF	Master W/O slave (Default)
ON	OFF	Master With Slave
OFF	ON	Master With Slave
ON	ON	Slave

SW2	Fan Status When Thermo-OFF
OFF	FAN OFF (Default)
ON	FAN ON

SW3	Auto Restart
OFF	With Auto Restart (Default)
ON	W/O Auto Restart

SW6-1	SW6-2	Temp. Compensation (Heating)
OFF	OFF	3(Default)
OFF	ON	4
ON	OFF	6
ON	ON	Reserved

FUNCTION SETTING INDICATION
2020702A1406

AWSI-OCD048-N11 AWSI-OCD060-N11

ENC2	Middle Static Pressure	High Static Pressure
0	0-25(Default)	0-50(Default)
1	26-37	51-80
2	38-50	81-120
3	51-100	121-150
4	>100	>150

ENC1	Capacity (Model)
0~4	Reserved
5	24
6	Reserved
7	30
8	36
9	48
A	60

S1(1-2)	S2	Address (Central control)
OFF-OFF	0-F	0-15(Default=0)
OFF-ON	0-F	16-31
ON-OFF	0-F	32-47
ON-ON	0-F	48-63

SW1-1	SW1-2	Anti Cold Air Setting
OFF	OFF	Fan OFF when ICT<15 (Default)
ON	OFF	Fan OFF when ICT<24
OFF	ON	Fan always working
ON	ON	Reserved

SW2	Fan Status When Thermo-OFF
OFF	FAN OFF (Default)
ON	FAN ON

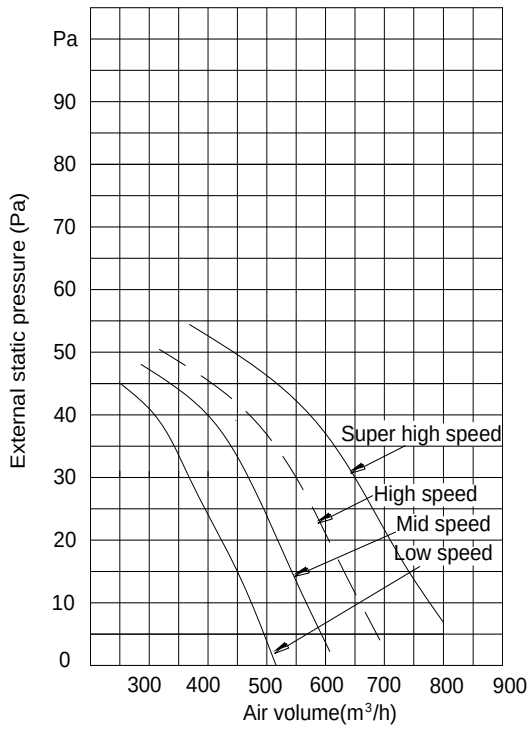
SW3	Auto Restart
OFF	With Auto Restart (Default)
ON	W/O Auto Restart

SW6-1	SW6-2	Temp. Compensation (Heating)
OFF	OFF	3(Default)
OFF	ON	4
ON	OFF	6
ON	ON	Reserved

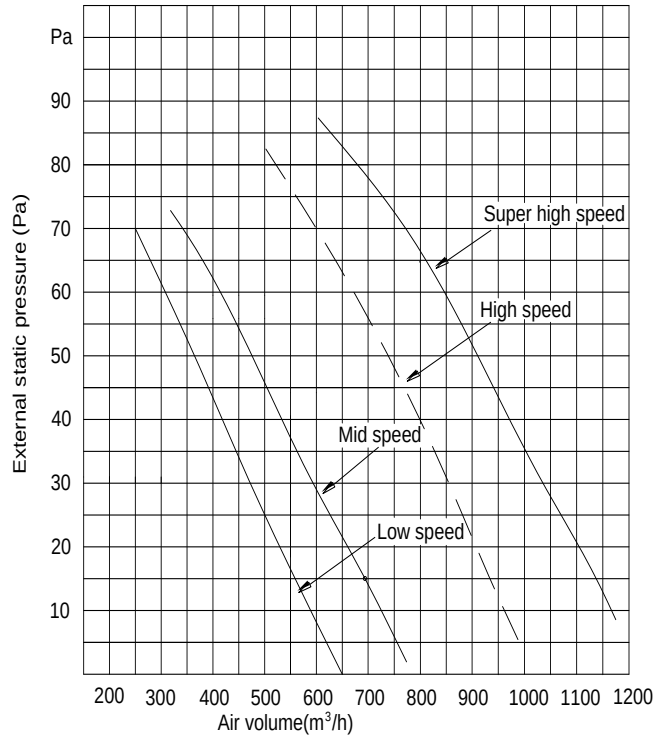
**FUNCTION SETTING
INDICATION
2020705A2811**

5. Static Pressure

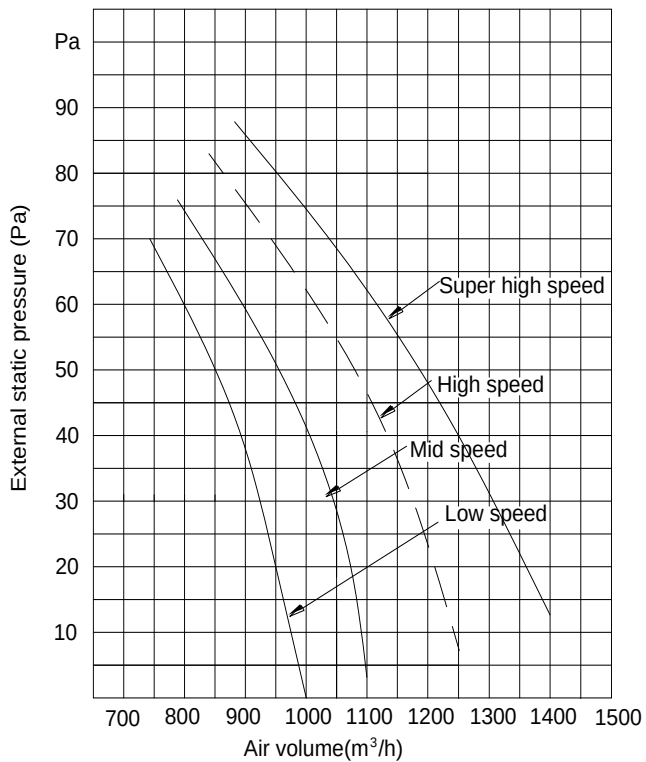
12,000Btu/h



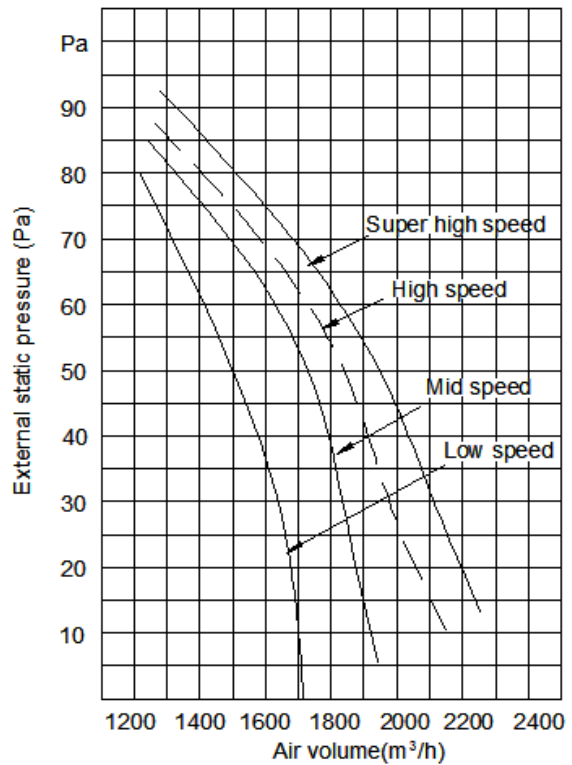
18,000Btu/h



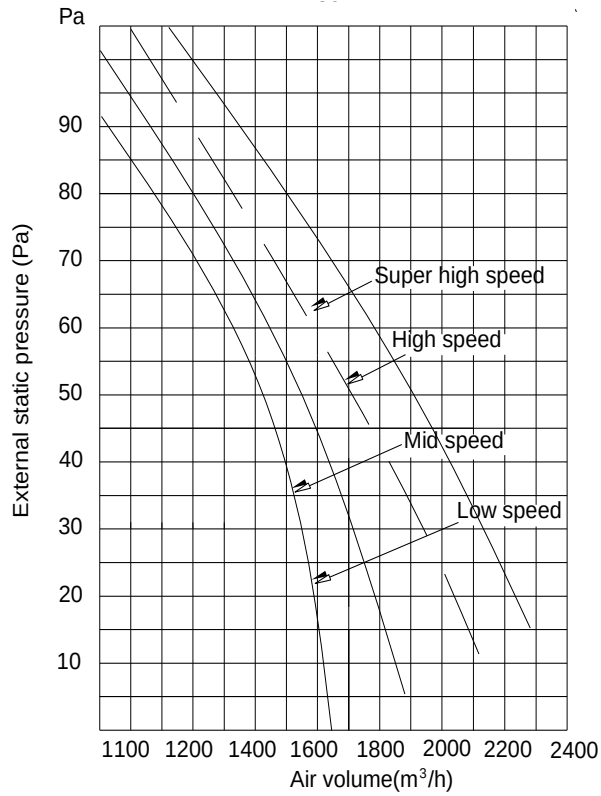
24,000Btu/h



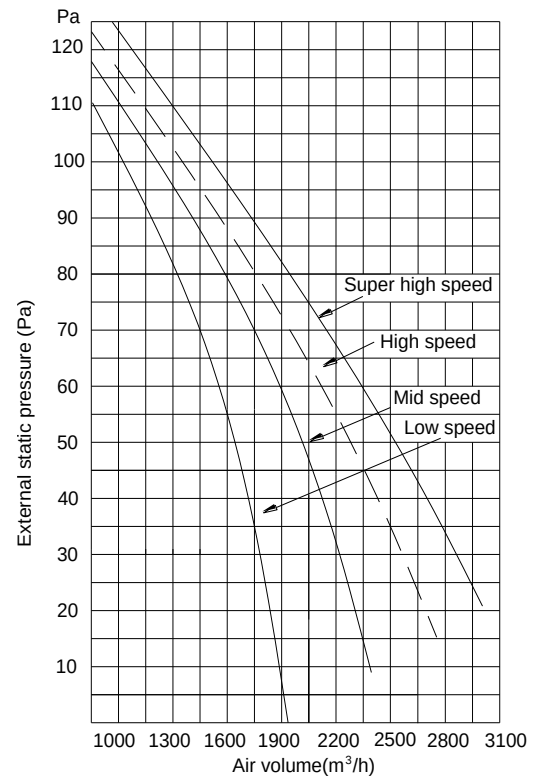
30,000Btu/h



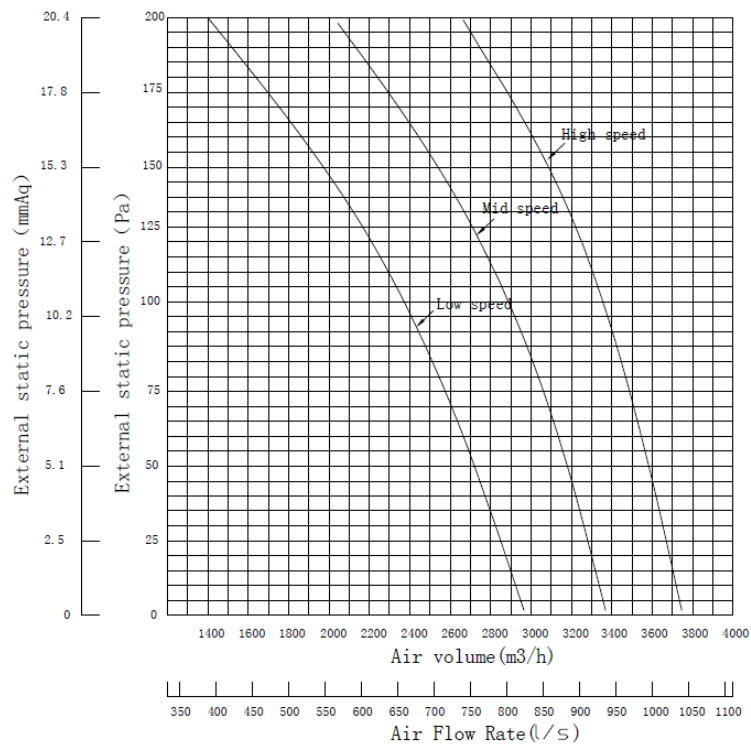
36,000Btu/h



48,000Btu/h



60,000Btu/h



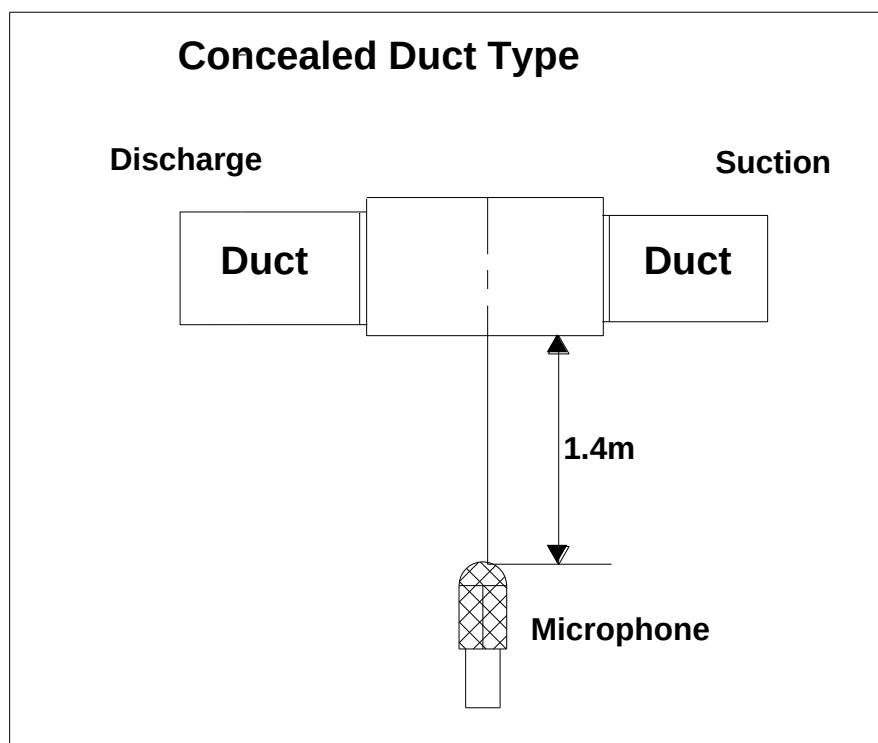
6. Electric Characteristics

Model	Indoor Unit				Power Supply
	Hz	Voltage	Min.	Max.	MFA
AWSI-OCD012-N11	50	220-240	198	254	/
AWSI-OCD018-N11	50	220-240	198	254	10
AWSI-OCD024-N11	50	220-240	198	254	10
AWSI-OCD030-N11	50	220-240	198	254	10
AWSI-OCD036-N11	50	220-240	198	254	10
AWSI-OCD048-N11	50	220-240	198	254	10
AWSI-OCD060-N11	50	220-240	198	254	10

Note:

MFA: Max. Fuse Amps. (A)

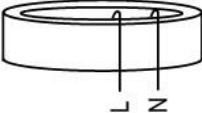
7. Sound Levels



Model	Sound Power dB(A)	Noise level dB(A)		
		H	M	L
AWSI-OCD012-N11	57	41	39	36
AWSI-OCD018-N11	58	45	43	39
AWSI-OCD024-N11	63	46	43	39
AWSI-OCD030-N11	65	48	44	40
AWSI-OCD036-N11	62	42	39	36
AWSI-OCD048-N11	62	42	39	36
AWSI-OCD060-N11	67	57	54	51

8. Accessories

AWSI-OCD012-N11,AWSI-OCD018-N11,AWSI-OCD024-N11,AWSI-OCD030-N11,AWSI-OCD036-N11, AWSI-OCD048-N11

	Name	Shape	Quantity
Tubing & Fittings	Soundproof / insulation sheath		2
	Binding tape		1
	Seal sponge		1
Drainpipe Fittings (for cooling & heating)	Drain joint		1
	Seal ring		1
Wired controller & Its Frame	Wired controller		1
Others	Owner' s manual		1
	Installation manual		1
EMS & It's fitting	Magnetic ring (twist the electric wires L and N around it to five circles)		1

AWSI-OCD060-N11

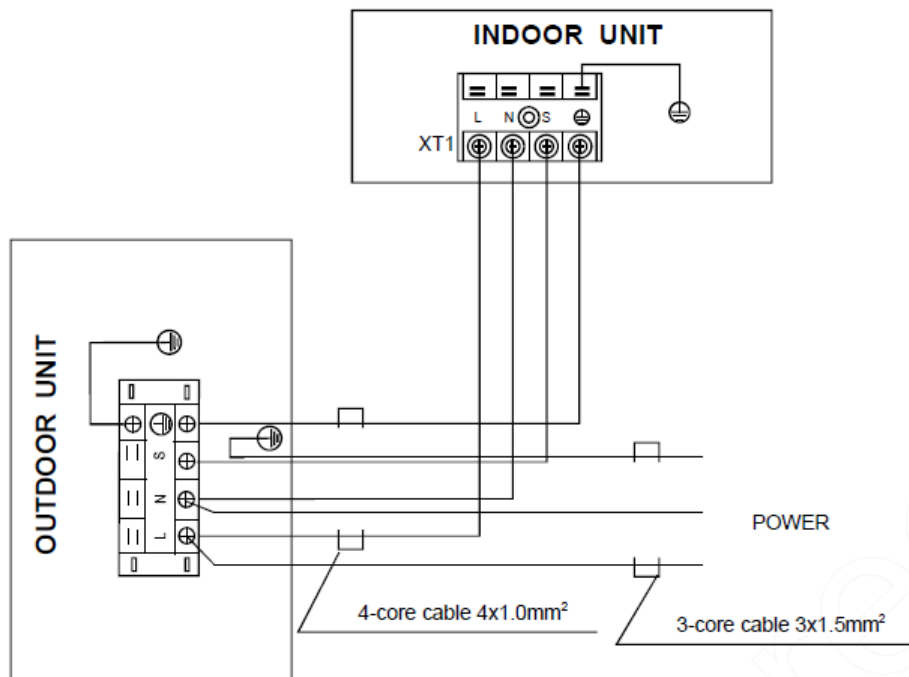
	Name	Shape	Quantity
Tubing & Fittings	Soundproof / insulation sheath		2
	Drain joint		1
Drainpipe Fittings (for cooling & heating)	Seal ring		1
	Wired controller		1
Wired controller & Its Frame	Owner' s manual of wired controller		1
	Wired controller installation manual		1
Others	Owner' s manual		1
	Installation manual		1

9. The Specification of Power

Capacity(Btu/h)		12000	18000-24000	30000	36000	36000	48000-60000
Indoor Unit Power	Phase	————	1-phase	1-phase	1-phase	1-phase	1-phase
	Frequency and Voltage	————	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz
	Power Wiring(mm ²)	————	3×1.0	3×1.0	3×1.0	3×1.0	3×1.0
	Circuit Breaker/ Fuse (A)	————	15/10	15/10	15/10	15/10	15/10
Outdoor Unit Power	Phase	1-phase	1-phase	1-phase	1-phase	3-phase	3-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	380-415V, 50Hz	380-415V, 50Hz
	Power Wiring(mm ²)	3×1.5	3×2.5	3×2.5	3×4.0	5×2.5	5×2.5
	Circuit Breaker/ Fuse (A)	20/16	30/20	40/30	40/30	30/20	30/25
Indoor/Outdoor Connecting Wiring(Weak Electric Signal) (mm ²)		————	3×0.2	3×0.2	3×0.2	3×0.2	3×0.2
Indoor/Outdoor Connecting Wiring(Strong Electric Signal) (mm ²)		4×1.0	————	————	————	————	————

10. Field Wiring

AWSI-OCD012-N11



12000Btu/h(1 PHASE)

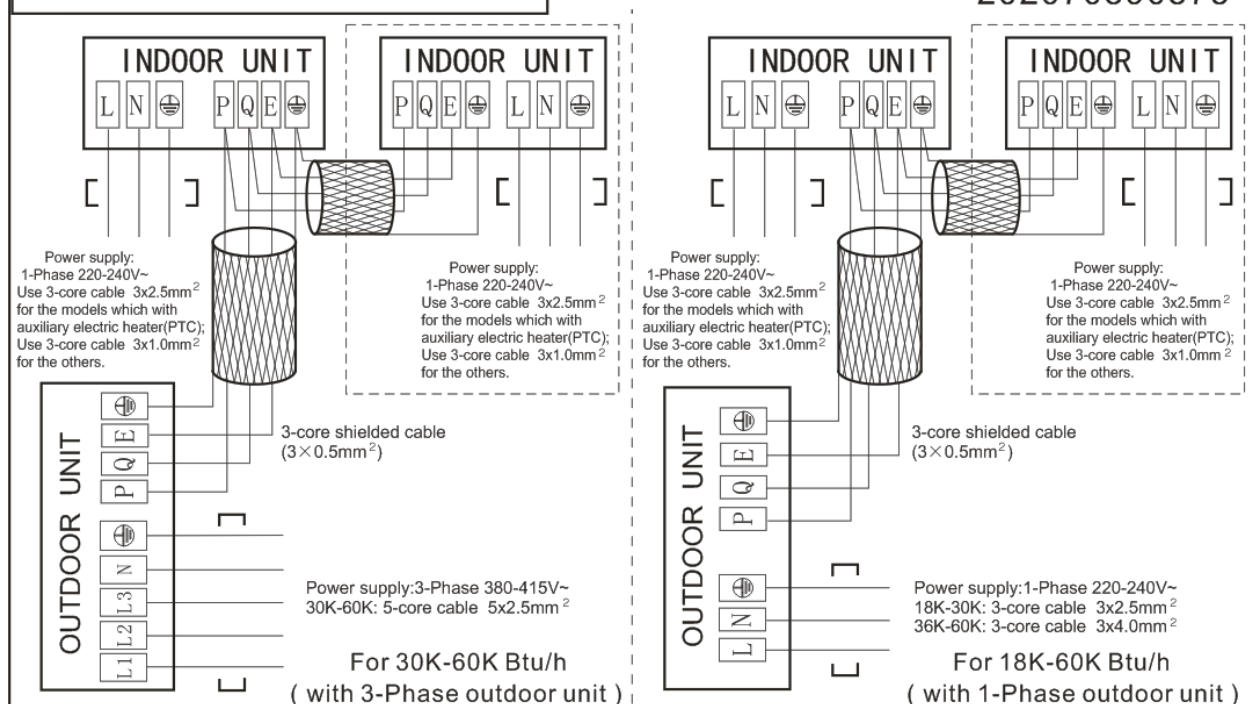
Air Conditioner Link-circuit (For R410a,Cooling& Heating)

NOTE:This wiring diagram indicates outdoor power supplying.

AWSI-OCD018-N11

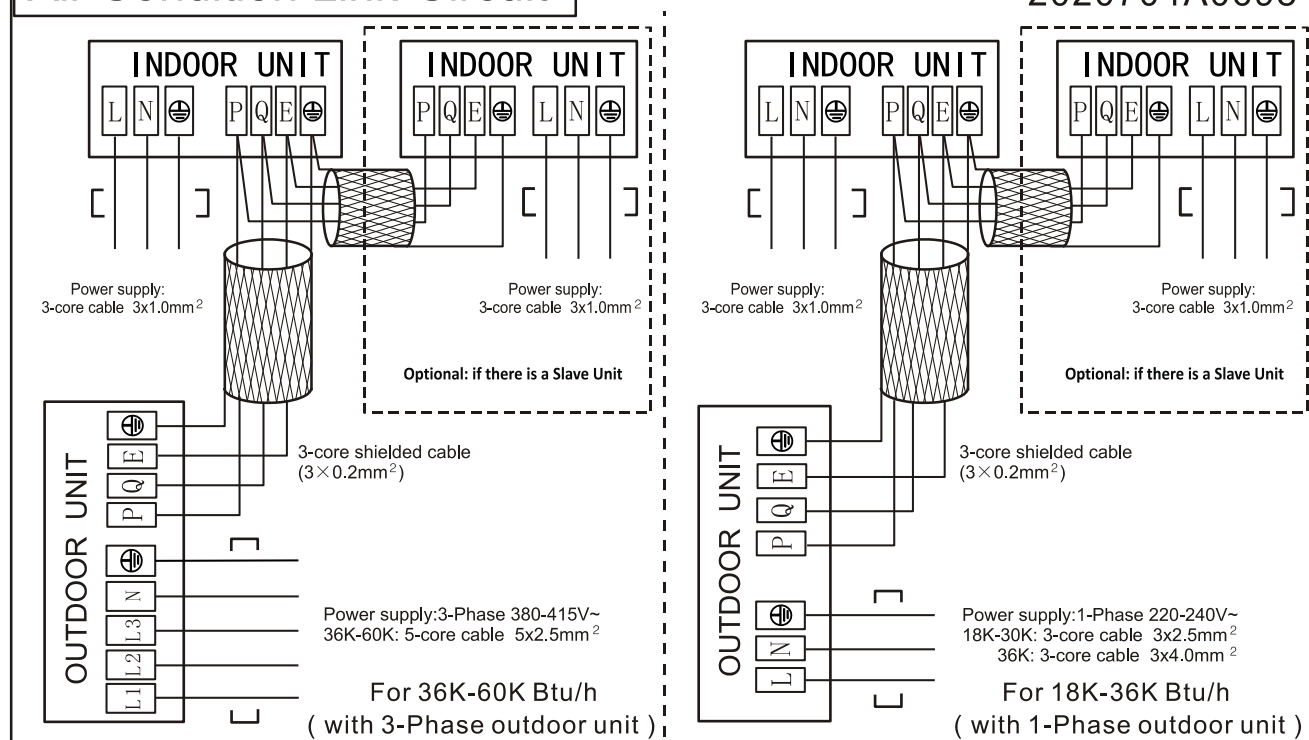
Air Condition Link-Circuit

202070390575



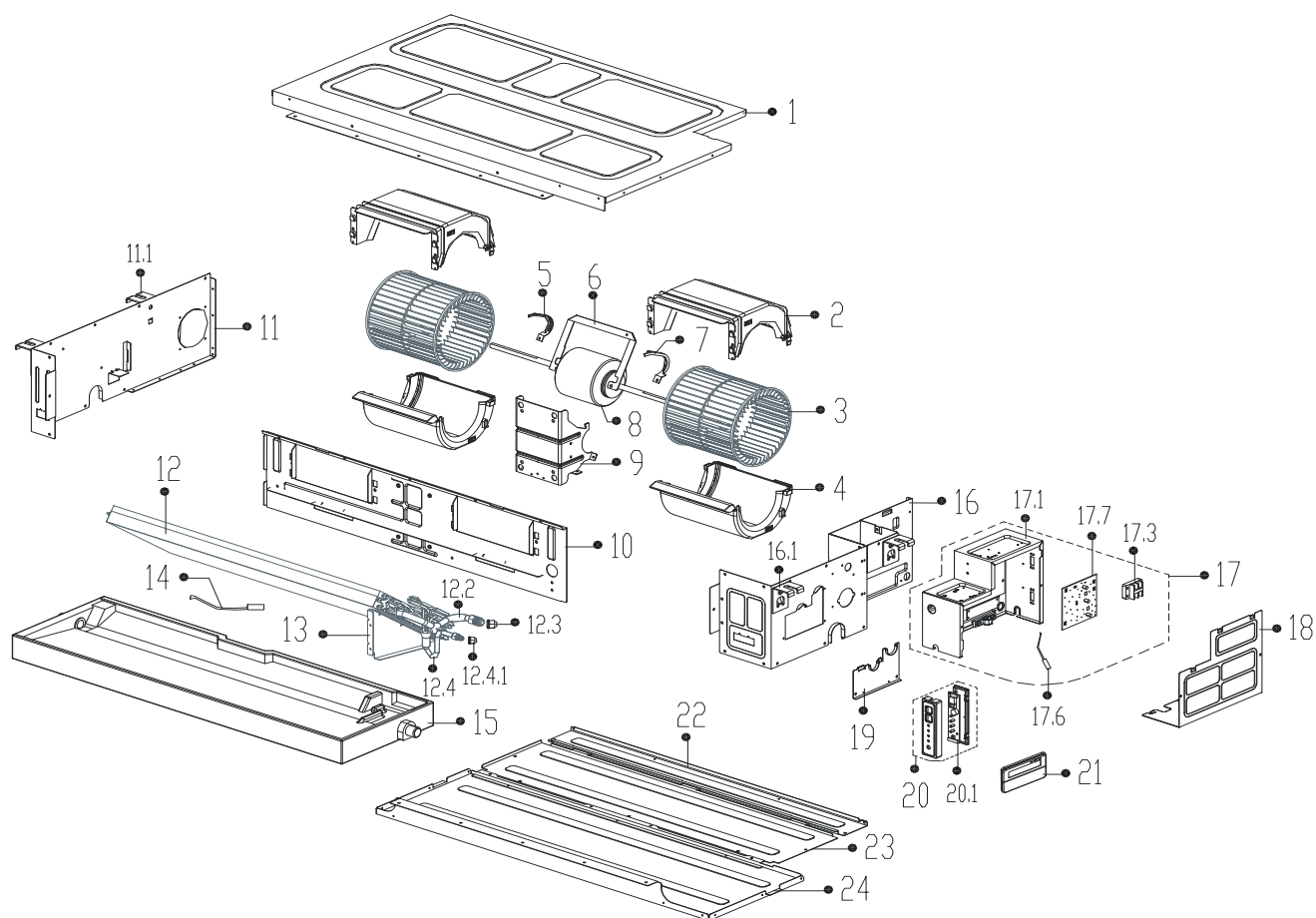
Air Condition Link-Circuit

2020704A0698



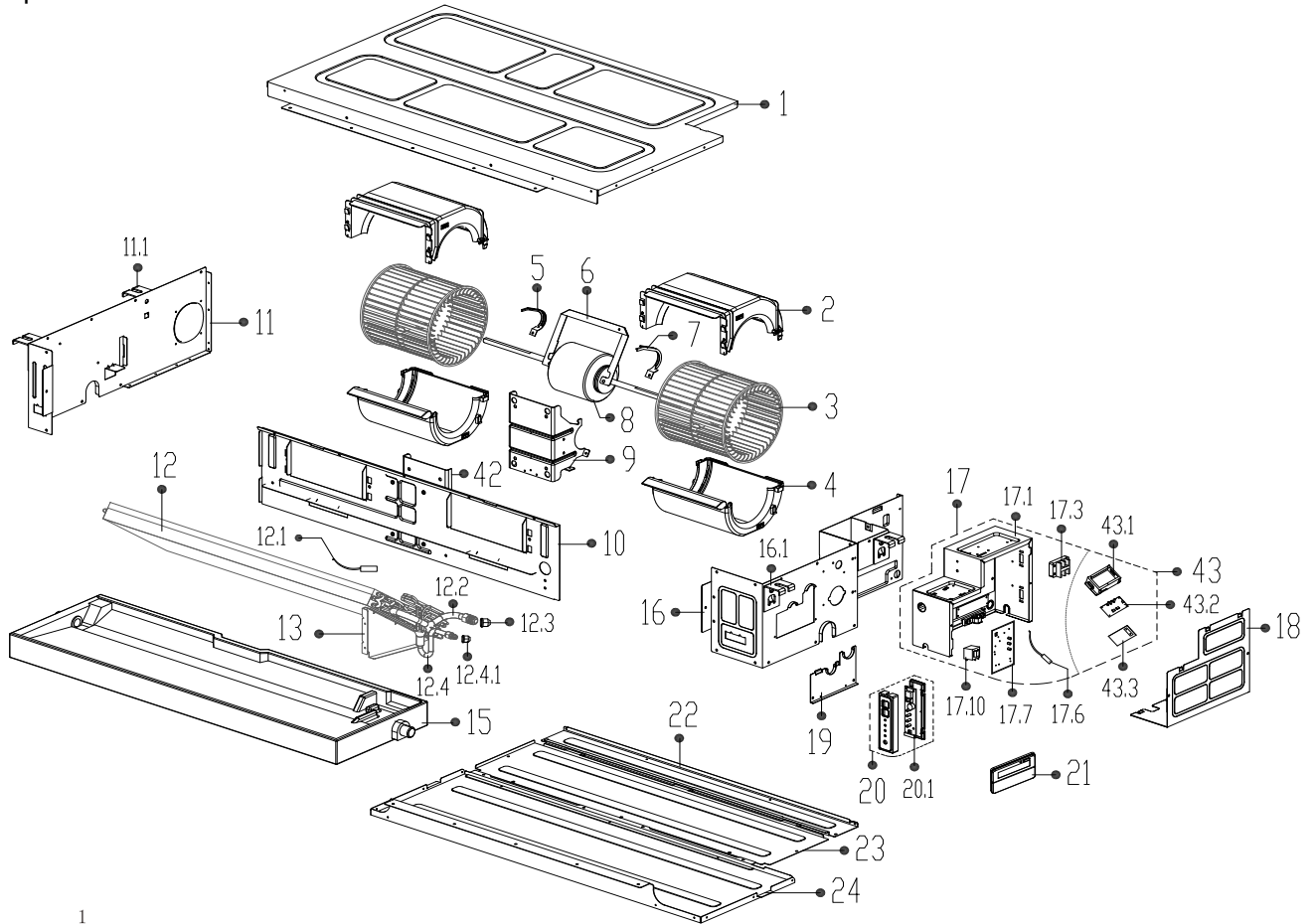
11. Exploded View and Spare Part list

Exploded View of indoor unit: AWSI-OCD012-N11



Spare part list of indoor unit: AWSI-OCD012-N11

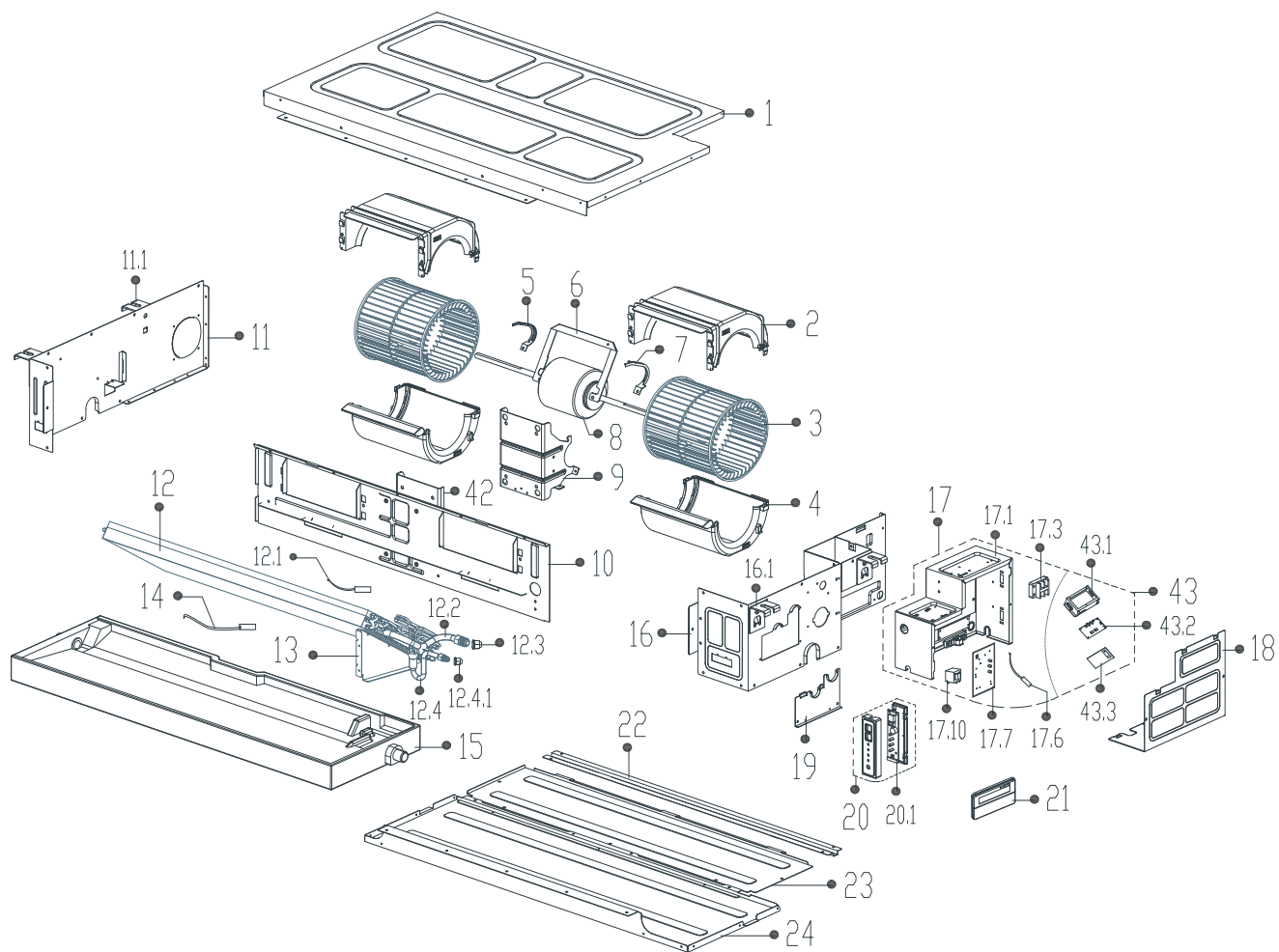
No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Chassis assembly	1	201285190007	14	Pipe temperature sensor assembly	1	202440500004
2	Up volute shell	2	201185190001	15	Water collector	1	202285190003
3	Centrifugal fan	2	201100100809	16	Right clapboard assembly	1	201270290089
4	Below volute shell	2	201185190002	16.1	Hook	2	201270890021
5	Fan motor axes clamp (left)	1	201280200005	17	Electronic control box assembly	1	203370190015
6	Fan motor fixing board	1	201252490002	17.1	Electronic control box	1	201270290163
7	Fan motor axes clamp (right)	1	201280200006	17.3	Wire joint	1	202301450003
8	Asynchronous motor	1	202400300053	17.6	Ambient temperature sensor assembly	1	202301310075
9	Supporter of fan motor	1	201252290005	17.7	Main control board assembly	1	201352290020
10	Middle beam assembly	1	201285190002	18	Cover of electronic control box	1	201270290081
11	Left clapboard assembly	1	201270290091	19	Pipe clamp board assembly	1	201270290082
11.1	Hook	2	201270890021	20	Display box assembly	1	203370190008
12	Evaporator assembly	1	201552290012	20.1	Display board assembly	1	201370290012
12.2	Output pipe assembly	1	201652290013	21	Wired controller	1	2033551A2826
12.3	Copper nut	1	201600320001	22	Rear beam	1	201285190003
12.4	Input pipe assembly	1	201670190020	23	Rear cover assembly	1	201285190004
12.4.1	Copper nut	1	201600320000	24	Top cover assembly	1	201285190008
13	Evaporator right support board assembly	1	201270290034				



Spare part list of indoor unit: AWSI-OCD018-N11

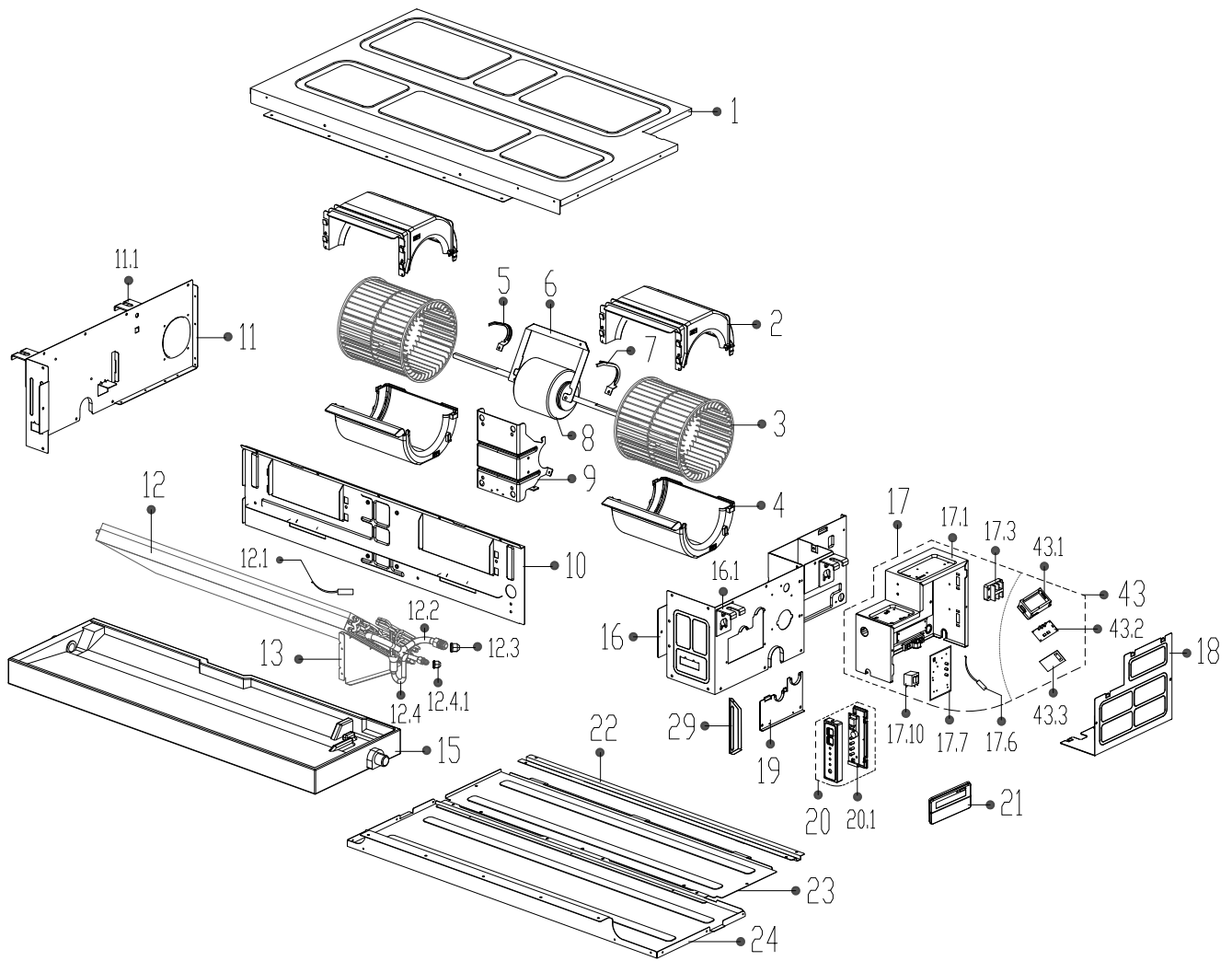
No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Chassis assembly	1	201270390381	16	Right clapboard assembly	1	201270390382
2	Up volute shell	2	201170590004	16.1	Hook	2	201270890021
3	Centrifugal fan	2	201100100807	17	Electronic control box assembly	1	203370390078
4	Below volute shell	2	201170590003	17.1	Electronic control box	1	201270590384
5	Fan motor axes clamp (left)	1	201280200005	17.3	Wire joint	1	202301450042
6	Fan motor fixing board	1	201270290101	17.6	Ambient temperature sensor assembly	1	202301310072
7	Fan motor axes clamp (right)	1	201280200006	17.7	Main control board assembly	1	201370390064
8	Asynchronous motor	1	202400300070	17.10	Reactor	1	202301000950
9	Supporter of fan motor	1	201270290100	18	Cover of electronic control box	1	201270590100
10	Middle beam assembly	1	201270390312	19	Pipe clamp board assembly	1	201270290082
11	Left clapboard assembly	1	201270390384	20	Display box assembly	1	203370190008
11.1	Hook	2	201270890021	20.1	Display board assembly	1	201370290012
12	Evaporator assembly	1	201570290053	21	Wired controller	1	2033551A2826
12.1	Pipe temperature sensor assembly	1	202440500004	22	Rear beam	1	201270390314
12.2	Output pipe assembly	1	201670290116	23	Rear cover assembly	1	201270390315
12.3	Copper nut	1	201600320002	24	Top cover assembly	1	201270290078
12.4	Input pipe assembly	1	201670290118	42	Fan motor fixing base	1	201270390379
12.4.1	Copper nut	1	201600320000	43	Electronic control box assembly	1	203319900796
13	Evaporator right support board assembly	1	201270390313	43.1	Electronic control box	1	201270590340
14	Pipe temperature sensor assembly	1	202301300804	43.2	Inverter control board assembly	1	201319903060
15	Water collector	1	202270290004	43.3	Radiator	1	202301900138

Exploded View of indoor unit: AWSI-OCD024-N11



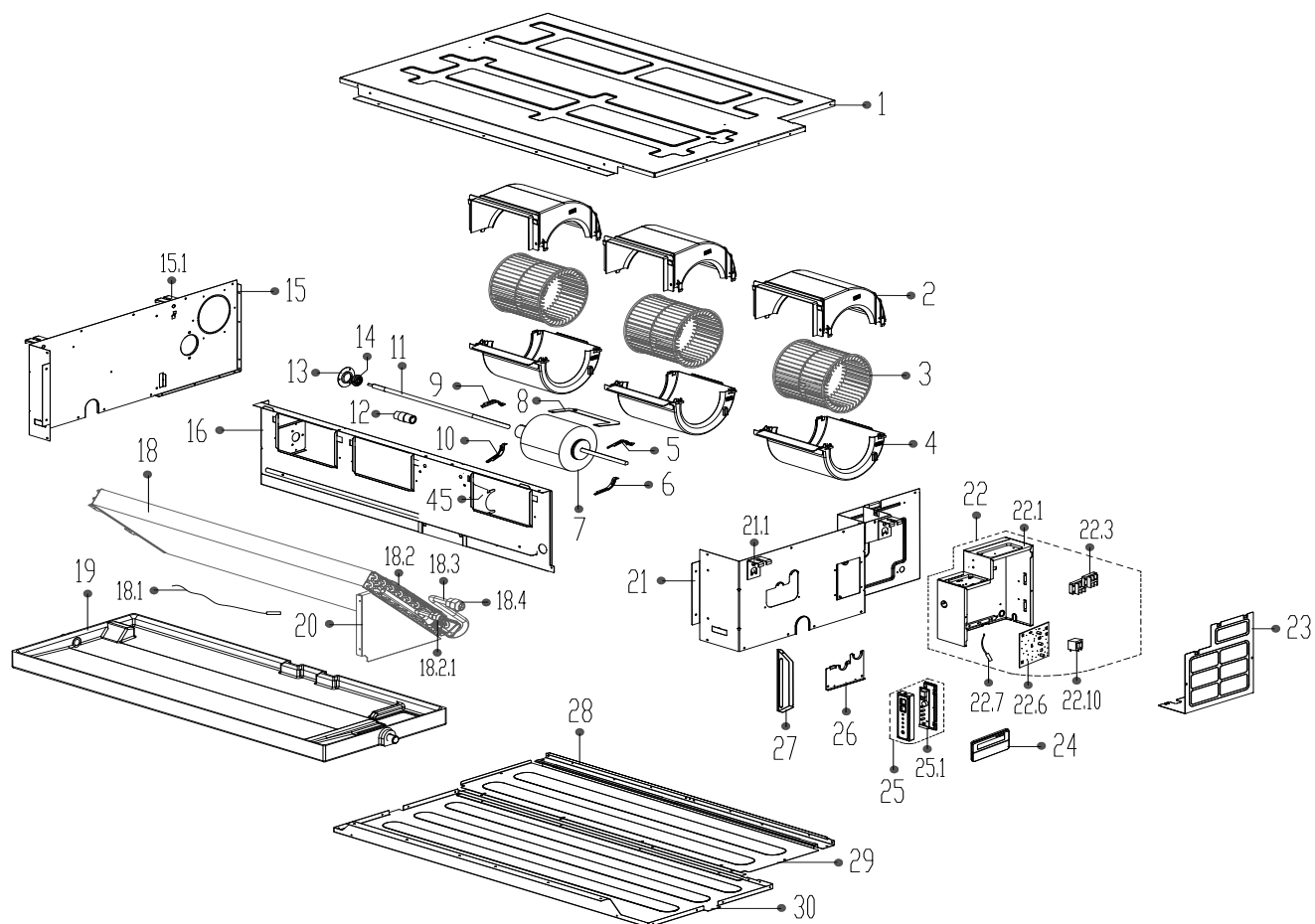
Spare part list of indoor unit:AWSI-OCD024-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Chassis assembly	1	201270390381	17.1	Electronic control box	1	201270590384
2	Up volute shell	2	201170590004	17.3	Wire joint	1	202301450042
3	Centrifugal fan	2	201100100807	17.6	Ambient temperature sensor assembly	1	202301310072
4	Below volute shell	2	201170590003	17.7	Main control board assembly	1	201370390064
5	Fan motor axes clamp (left)	1	201280200005	17.10	Reactor	1	202301000950
6	Fan motor fixing board	1	201270290101	18	Cover of electronic control box	1	201270590100
7	Fan motor axes clamp (right)	1	201280200006	19	Pipe clamp board assembly	1	201270290082
8	Asynchronous motor	1	202400300070	20	Display box assembly	1	2033702A0077
9	Supporter of fan motor	1	201270290100	20.1	Display board assembly	1	201370290012
10	Middle beam assembly	1	201270390312	21	Wired controller	1	2033551A4281
11	Left clapboard assembly	1	201270390384	22	Rear beam	1	201270390314
11.1	Hook	2	201270890021	23	Rear cover assembly	1	201270390315
12	Evaporator assembly	1	201570390029	24	Top cover assembly	1	201270290078
12.1	Pipe temperature sensor assembly	1	202440500004	42	Fan motor fixing base	1	201270390379
12.2	Output pipe assembly	1	201670390138	43	Electronic control box assembly	1	203319900796
12.3	Copper nut	1	201600320003	43.1	Electronic control box	1	201270590340
12.4	Input pipe assembly	1	201670390130	43.2	Inverter control board assembly	1	201319903060
12.4.1	Copper nut	1	201600320001	43.3	Radiator	1	202301900138
13	Evaporator support right board assembly	1	201270390313		Drain pump	1	202400600005
14	Pipe temperature sensor assembly	1	202301300804		Holder of drain pump	1	201270290085
15	Water collector	1	202270290004		Liquid level sensor assembly	1	202301310051
16	Right clapboard assembly	1	201270390383		Flange	1	201270390316
16.1	Hook	2	201270890021		Air filter	1	201170290011
17	Electronic control box assembly	1	203370390078				



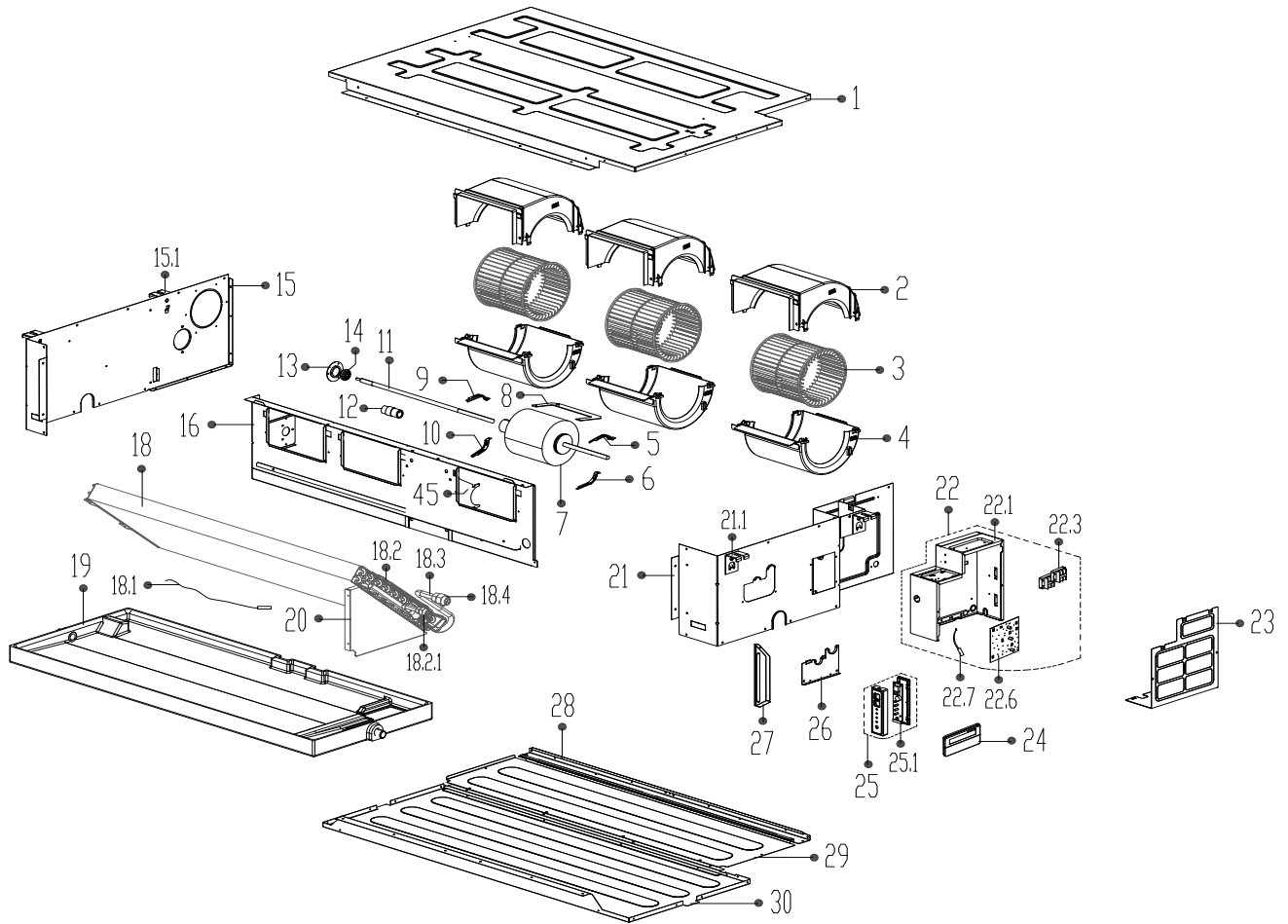
Spare part list of indoor unit: AWSI-OCD030-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Chassis assembly	1	201270590299	17.1	Electronic control box	1	201270590384
2	Up volute shell	2	201170590004	17.3	Wire joint	1	202301450042
3	Centrifugal fan	2	201100100807	17.6	Ambient temperature sensor assembly	1	202301310072
4	Below volute shell	2	201170590003	17.7	Main control board assembly	1	201370390064
5	Fan motor axes clamp (left)	1	201280200005	17.10	Reactor	1	202301000950
6	Fan motor fixing board	1	201270290101	18	Cover of electronic control box	1	201270590100
7	Fan motor axes clamp (right)	1	201280200006	19	Pipe clamp board assembly	1	201270290082
8	Asynchronous motor	1	202400300510	20	Display box assembly	1	2033702A0077
9	Supporter of fan motor	1	201270290100	20.1	Display board assembly	1	201370290012
10	Middle beam assembly	1	201270590298	21	Wired controller	1	2033551A4281
11	Left clapboard assembly	1	201270590302	22	Rear beam	1	201270590183
11.1	Hook	2	201270890021	23	Rear cover assembly	1	201270590184
12	Evaporator assembly	1	201570590113	24	Top cover assembly	1	201270590272
12.1	Pipe temperature sensor assembly	1	202301300804	29	Right clapboard strengthen board	1	201270590176
12.1	Pipe temperature sensor assembly	1	202440500004	43	Electronic control box assembly	1	203319900794
12.2	Output pipe assembly	1	201670590265	43.1	Electronic control box	1	201270590340
12.3	Copper nut	1	201600320003	43.2	Inverter control board assembly	1	201319903054
12.4	Input pipe assembly	1	201670590266	43.3	Radiator	1	202301900138
12.4.1	Copper nut	1	201600320001		Drain pump	1	202400600005
13	Evaporator support assembly right board	1	201270590181		Holder of drain pump	1	201270290085
15	Water collector	1	202270590004		Liquid level sensor assembly	1	202301310051
16	Right clapboard assembly	1	201270590301		Flange	1	201270590185
16.1	Hook	2	201270890021		Air filter	1	201170590006
17	Electronic control box assembly	1	203370390078				



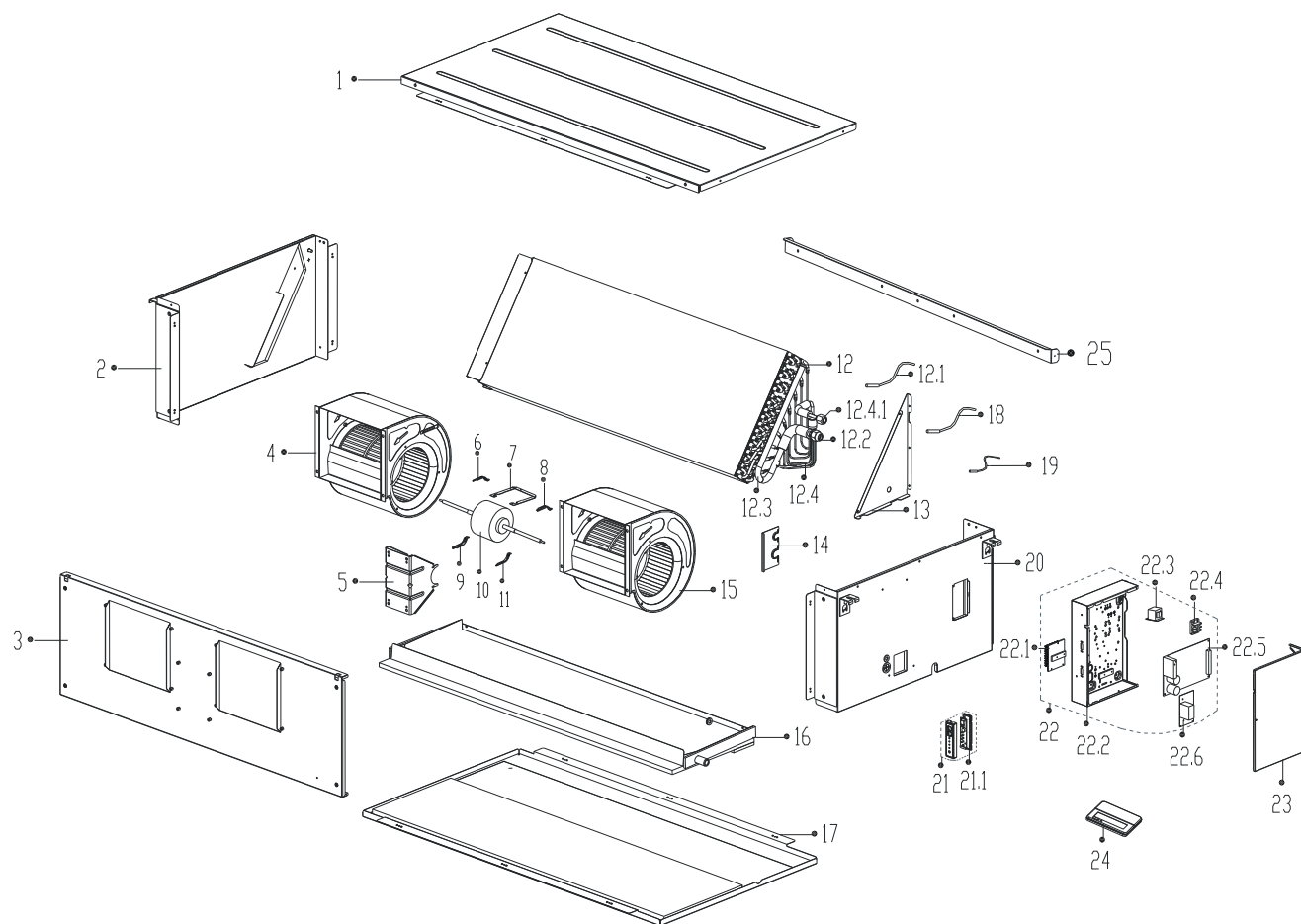
Spare part list of indoor unit: AWSI-OCD036-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Chassis assembly	1	201270590299	17.1	Electronic control box	1	201270590384
2	Up volute shell	2	201170590004	17.3	Wire joint	1	202301450042
3	Centrifugal fan	2	201100100807	17.6	Ambient temperature sensor assembly	1	202301310072
4	Below volute shell	2	201170590003	17.7	Main control board assembly	1	201370390064
5	Fan motor axes clamp (left)	1	201280200005	17.10	Reactor	1	202301000950
6	Fan motor fixing board	1	201270290101	18	Cover of electronic control box	1	201270590100
7	Fan motor axes clamp (right)	1	201280200006	19	Pipe clamp board assembly	1	201270290082
8	Asynchronous motor	1	202400300510	20	Display box assembly	1	2033702A0077
9	Supporter of fan motor	1	201270290100	20.1	Display board assembly	1	201370290012
10	Middle beam assembly	1	201270590298	21	Wired controller	1	2033551A4281
11	Left clapboard assembly	1	201270590302	22	Rear beam	1	201270590183
11.1	Hook	2	201270890021	23	Rear cover assembly	1	201270590184
12	Evaporator assembly	1	201570590113	24	Top cover assembly	1	201270590272
12.1	Pipe temperature sensor assembly	1	202301300804	29	Right clapboard strengthen board	1	201270590176
12.1	Pipe temperature sensor assembly	1	202440500004	43	Electronic control box assembly	1	203319900794
12.2	Output pipe assembly	1	201670590265	43.1	Electronic control box	1	201270590340
12.3	Copper nut	1	201600320003	43.2	Inverter control board assembly	1	201319903054
12.4	Input pipe assembly	1	201670590266	43.3	Radiator	1	202301900138
12.4.1	Copper nut	1	201600320001		Drain pump	1	202400600005
13	Evaporator support right board assembly	1	201270590181		Holder of drain pump	1	201270290085
15	Water collector	1	202270590004		Liquid level sensor assembly	1	202301310051
16	Right clapboard assembly	1	201270590301		Flange	1	201270590185
16.1	Hook	2	201270890021		Air filter	1	201170590006
17	Electronic control box assembly	1	203370390078				



Spare part list of indoor unit: AWSI-OCD048-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Chassis assembly	1	201270790180	19	Water collector	1	202270990001
2	Up volute shell	3	201170590004	20	Evaporator right support assembly board	1	201270790134
3	Centrifugal fan	3	201100100807	21	Right clapboard assembly	1	201270790182
4	Below volute shell	3	201170590003	21.1	Hook	2	201270890021
5	Fan motor top fixing clamp (right)	1	201286000008	22	Electronic control box assembly	1	203370390080
6	Fan motor below fixing clamp (right)	1	201286000053	22.1	Electronic control box	1	201270590384
7	Asynchronous motor	1	202400300055	22.3	Wire joint	1	202301450042
8	Fan motor fixing board	1	201270790176	22.6	Main control board assembly	1	201370390071
9	Fan motor top fixing clamp (left)	1	201286000007	22.7	Ambient temperature sensor assembly	1	202301310072
10	Fan motor below fixing clamp (left)	1	201286000052	23	Cover of electronic control box	1	201270590100
11	Connecting shaft	1	202501180006	24	Wired controller	1	2033551A4281
12	Coupling	1	202970790001	25	Display box assembly	1	2033702A0077
13	Bearing Fixing board	1	201287000011	25.1	Display board assembly	1	201370290012
14	Bearing base	1	202732400001	26	Pipe clamp board assembly	1	201270290082
15	Left clapboard assembly	1	201270790183	27	Right clapboard strengthen board	1	201270790042
15.1	Hook	2	201270890021	28	Rear beam assembly	1	201270790179
16	Middle beam assembly	1	201270790178	29	Rear cover assembly	1	201270790136
18	Evaporator assembly	1	201570790050	30	Top cover assembly	1	201270790135
18.1	Pipe temperature sensor assembly	1	202301300804	45	Supporter assembly of fan motor	1	201270790177
18.1	Pipe temperature sensor assembly	1	202440500004		Drain pump	1	202400600005
18.2	Input pipe assembly	1	201670790142		Holder of drain pump	1	201270290085
18.2.1	Copper nut	1	201600320001		Liquid level sensor assembly	1	202301310051
18.3	Output pipe assembly	1	201670790225		Flange	1	201270790137
18.4	Copper nut	1	201600320003		Air filter	1	201170790007



Spare part list of indoor unit: AWSI-OCD060-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Top cover assembly	1	201270890273	16	Water collector	1	2022708A0001
2	Left assembly clapboard	1	2012708A0063	17	Chassis assembly	1	2012708A0069
3	Front assembly clapboard	1	201270890265	18	Ambient temperature sensor assembly	1	202301300197
4	Left fan assembly	1	201200300873	19	Pipe temperature sensor	1	202301300111
5	Supporter of fan motor	1	201270790177	20	Right assembly clapboard	1	2012708A0061
6	Fan motor top fixing clamp (left)	1	201286000007	21	Display box assembly	1	2033702A0077
7	Fan motor fixing board	1	201270790176	21.1	Display assembly board	1	201370290012
8	Fan motor top fixing clamp (right)	1	201286000008	22	Electronic control box assembly	1	203370790049
9	Fan motor below fixing clamp (left)	1	201286000052	22.1	Radiator	1	202301901195
10	Brushless DC motor	1	202400300511	22.2	Electronic control box	1	201270890279
11	Fan motor below fixing clamp (right)	1	201286000053	22.3	Reactance	1	202301000950
12	Evaporator assembly	1	2015708A0038	22.4	Wire joint	1	202301400215
12.1	Pipe temperature sensor	1	202301300111	22.5	Main control board assembly	1	201370790020
12.1	Pipe temperature sensor	1	202301300804	22.6	Inverter control board assembly	1	201319903058
12.2	Copper nut	1	201600320004	23	Cover of electronic control box	1	201270890254
12.3	Output pipe assembly	1	201670890312	24	Wired controller	1	2033551A4281
12.4	Input pipe assembly	1	201670890318	25	Flange board	4	201270890278
12.4.1	Copper nut	1	201600320001		Drain pump	1	202400600005
13	Right supporter of evaporator	1	2012708A0065		Holder of drain pump	1	201270290085
14	Cover board assembly	1	201270390441		Liquid level sensor assembly	1	202301310051
15	Right fan assembly	1	201200300874		Air filter	1	2011708A0001

Ceiling & Floor Type

1. Features		85
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1. Features

1.1. New design, more modern and elegant appearance.

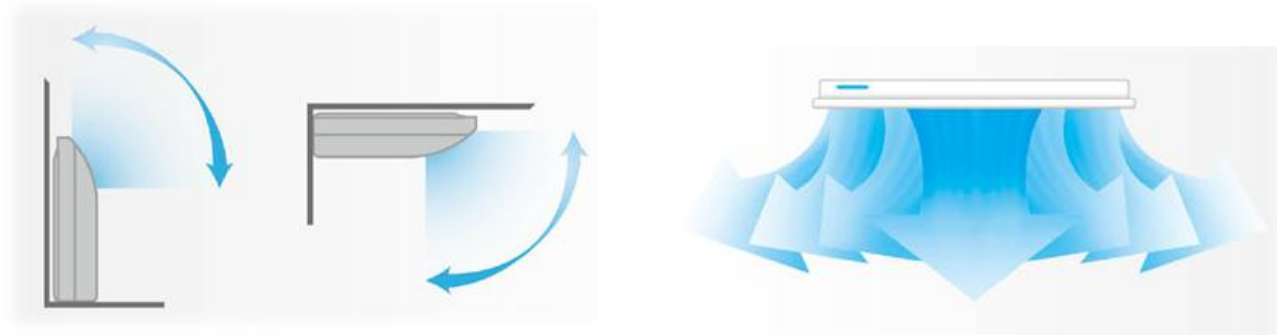


1.2. Convenient installation

- The ceiling type can be easily installed into a corner of the ceiling even if the ceiling is very narrow
- It is especially useful when installation of an air conditioner in the center of the ceiling is impossible due to a structure such as one lighting.

1.3. Two direction auto swing (vertical & horizontal) and wide angle air flow,

- Air flow directional control minimizes the air resistance and produces wider air flow to vertical direction.
- The range of horizontal air discharge is widened which secures wider air flow distribution to provide more comfortable air circulation no matter where the unit is set up



1.4. Three level fan speed, more humanism design, meets different air-supply requirement.

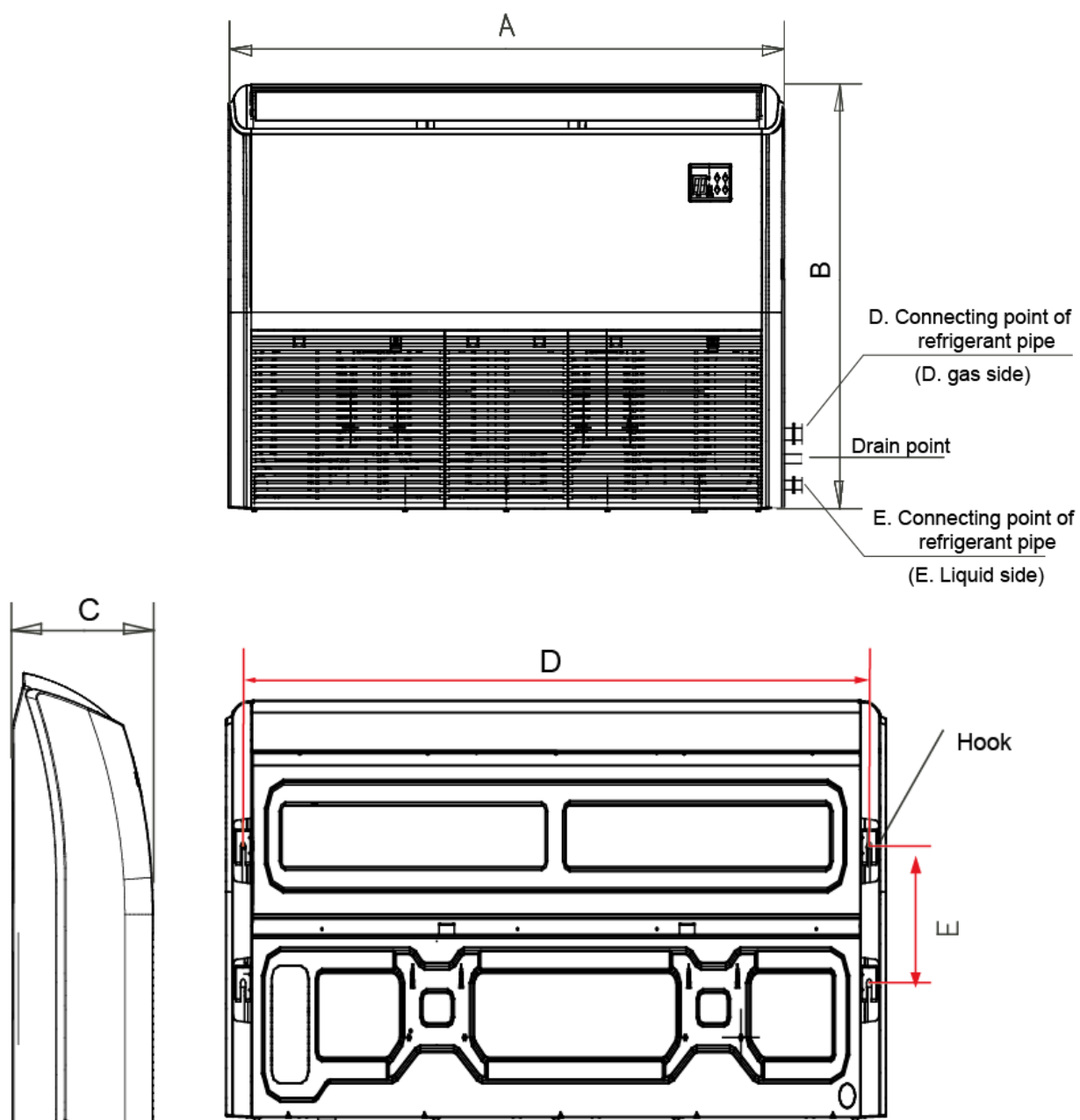
1.5. New foam drain pan with plastic-spraying inner surface



1.6. Easy operation.

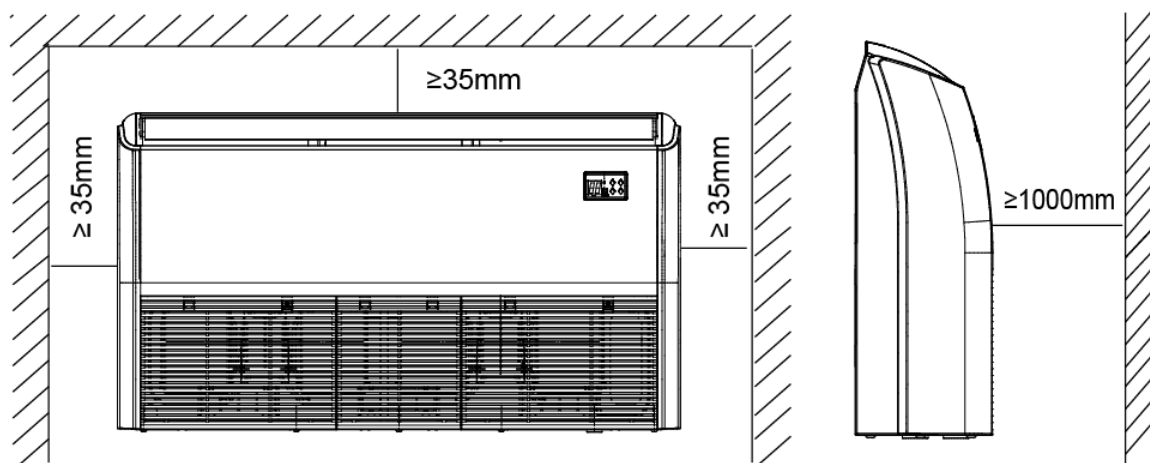
1.7. Remote control and optional wired control method.

2. Dimensions



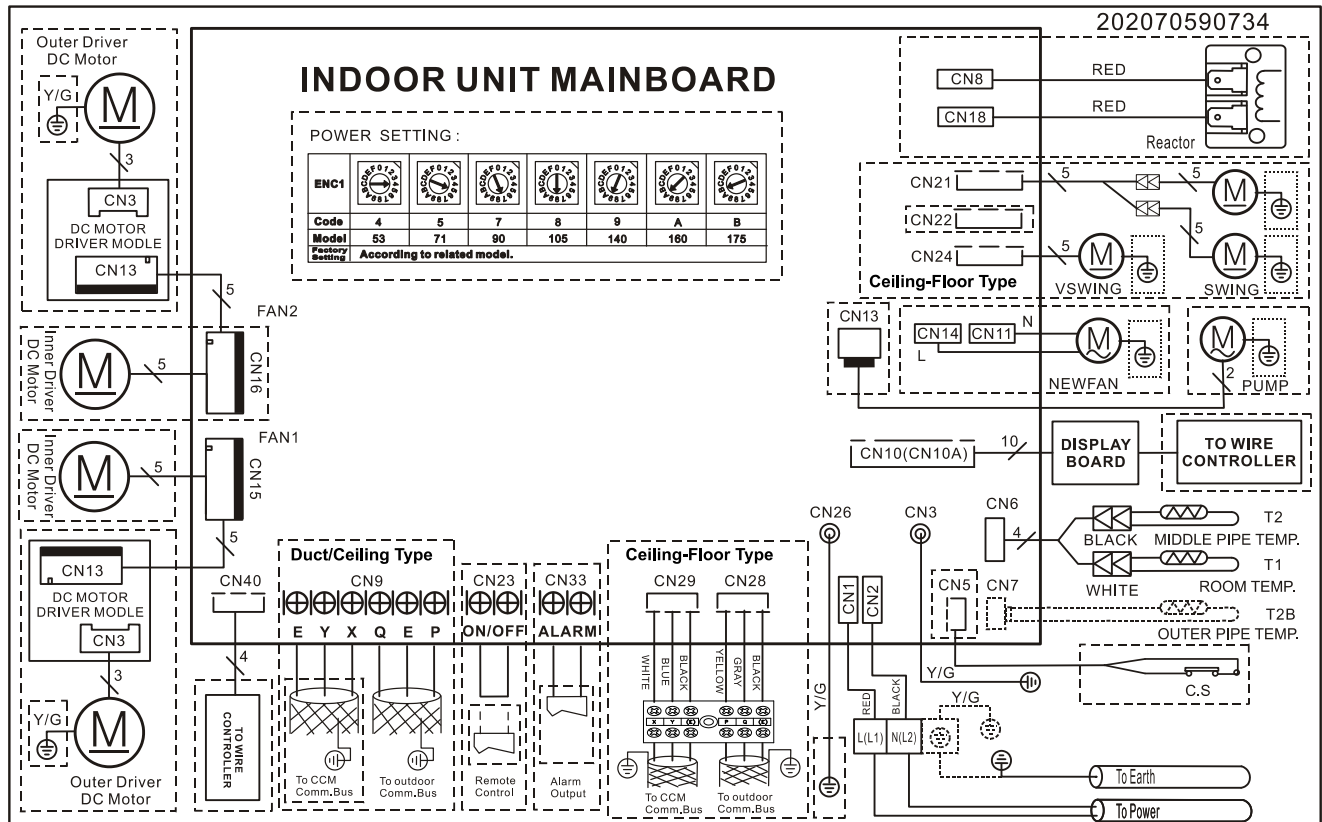
Model	A	B	C	D	E
AWSI-TBD018-N11	1068	675	235	983	220
AWSI-TBD024-N11	1068	675	235	983	220
AWSI-TBD030-N11	1285	675	235	1200	220
AWSI-TBD036-N11	1285	675	235	1200	220
AWSI-TBD048-N11	1650	675	235	1565	220

3. Service Space

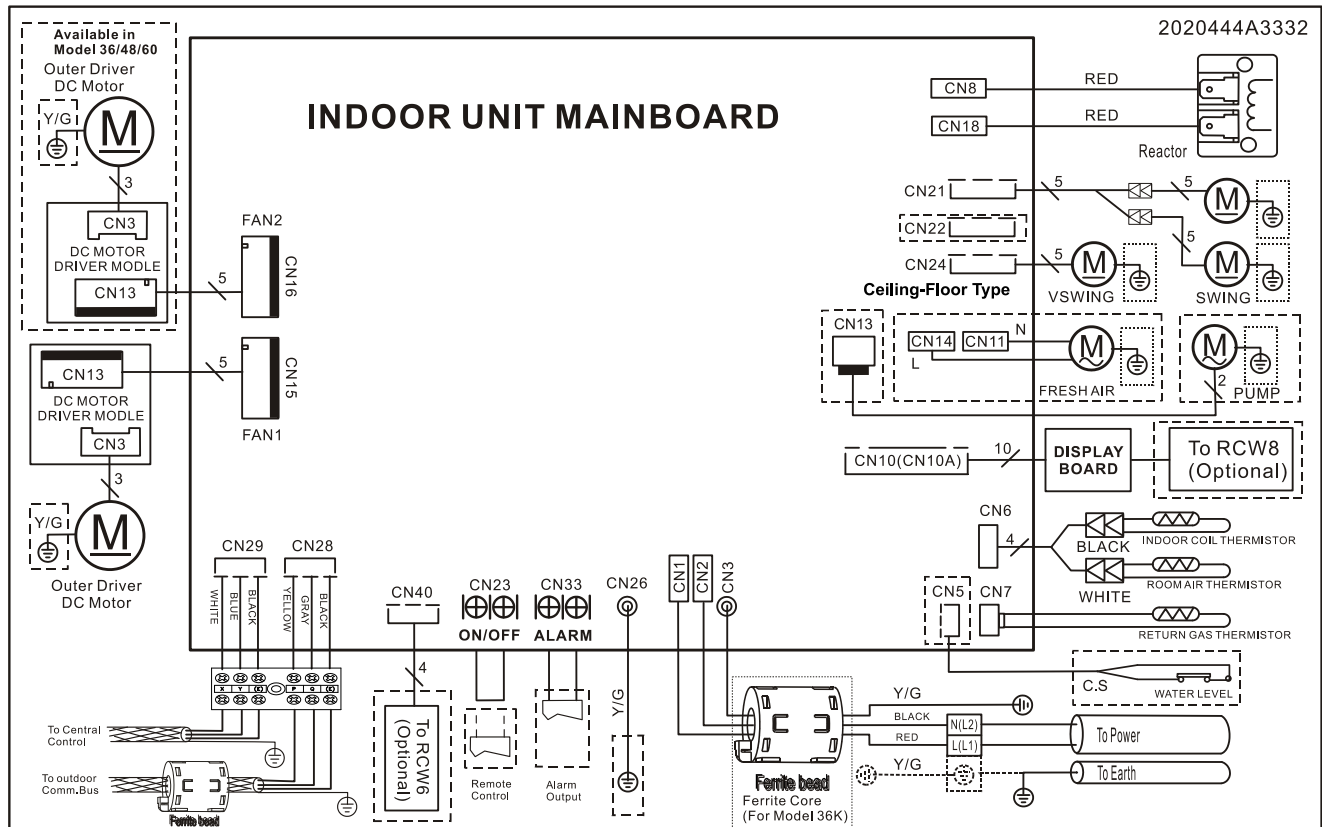


4. Wiring Diagrams

AWSI-TBD018-N11



AWSI-TBD024-N11 AWSI-TBD030-N11 AWSI-TBD036-N11 AWSI-TBD048-N11



AWSI-TBD018-N11

For Setting NETAddress					For Setting POWER											
S1+S2					ENC1											
Code	0~F	00	0~F	01	0~F	10	0~F	11	Code	4	5	7	8	9	A	B
NETAddress	0~15	16~31	32~47	48~63	POWER	53	71	90	105	140	160	175				
Factory Setting	✓				Factory Setting	According to related model.										

For Setting static pressure						For temp. compensation					
ENC2						SW6					
Code	0	1	2	3	4	TYPE	/	/	/	/	
high static pressure	0~50	51~80	81~120	121~150	>150	DUCT TYPE	3℃	4℃	6℃	According to E Function	
Middle static pressure	0~25	26~37	38~50	51~100	>100	CEILING AND FLOOR TYPE	1℃	4℃	6℃		
Factory Setting	✓					For Setting CEILING TYPE or FLOOR TYPE	FLOOR TYPE	CEILING TYPE			
						Factory Setting	✓				

For Setting Fan Motor Control then No Power Request			For Setting Auto-Restart		For Setting Fan Quantity (optional)	
SW2			SW3		SW4	
Mode	Fan OFF	Fan ON	Mode	ON	Mode	Single Fan
Factory Setting	✓		Factory Setting	✓	Factory Setting	✓

FUNCTION SETTING INDICATION

202070590737

AWSI-TBD024-N11 AWSI-TBD030-N11 AWSI-TBD036-N11 AWSI-TBD048-N11

2020705A2812

FUNCTION SETTING INDICATION

ENC1	Capacity (Model)
0~4	Reserved
5	24
6	Reserved
7	30
8	36
9	48
A	60

S1(1-2)	S2	Address (Central control)
OFF-OFF	0-F	0-15(Default=0)
OFF-ON	0-F	16-31
ON-OFF	0-F	32-47
ON-ON	0-F	48-63

SW1-1	SW1-2	Anti Cold Air Setting
OFF	OFF	Fan OFF when ICT<15
OFF	ON	Fan OFF when ICT<24
ON	OFF	Fan always working
ON	ON	Reserved

SW6-1	SW6-2	Temp. Compensation (Heating)
OFF	OFF	1(Default, Floor)
OFF	ON	4 (Ceiling)
ON	OFF	6 (Ceiling)
ON	ON	Reserved

SW3	Auto Restart
OFF	With Auto Restart (Default)
ON	W/O Auto Restart

SW2	Fan Status When Thermo-OFF
OFF	FAN OFF (Default)
ON	FAN ON

SW4	Indoor Fan Qty.
OFF	Single Fan
ON	Double Fan (Default)

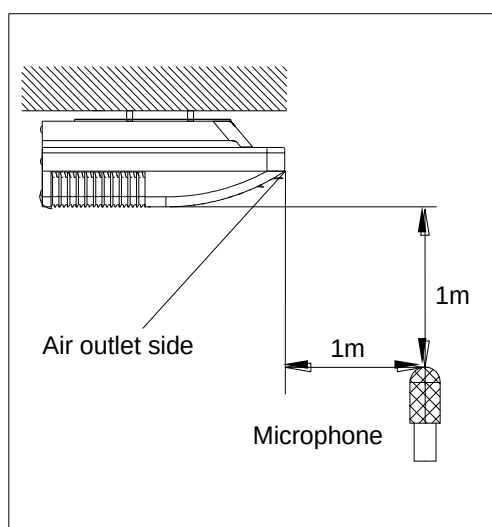
5. Electric Characteristics

Model	Indoor Units				Power Supply
	Hz	Voltage	Min.	Max.	MFA
AWSI-TBD018-N11	50	220-240	198	254	10
AWSI-TBD024-N11	50	220-240	198	254	10
AWSI-TBD030-N11	50	220-240	198	254	10
AWSI-TBD036-N11	50	220-240	198	254	10
AWSI-TBD048-N11	50	220-240	198	254	10

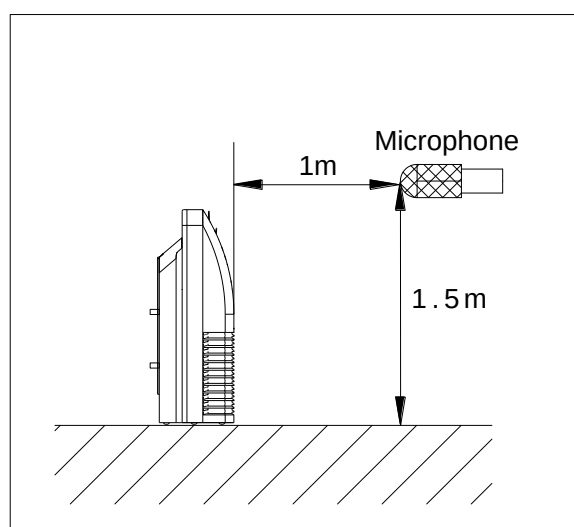
Note:

MFA: Max. Fuse Amps. (A)

6. Sound Levels



Ceiling



Floor

Model	Sound Power dB (A)	Noise level dB(A)		
		H	M	L
AWSI-TBD018-N11	60	46	43	40
AWSI-TBD024-N11	63	55	50	46
AWSITFBD030-N11	64	55	50	46
AWSI-TBD036-N11	65	54	49	44
AWSI-TBD048-N11	68	57	54	51

7. Accessories

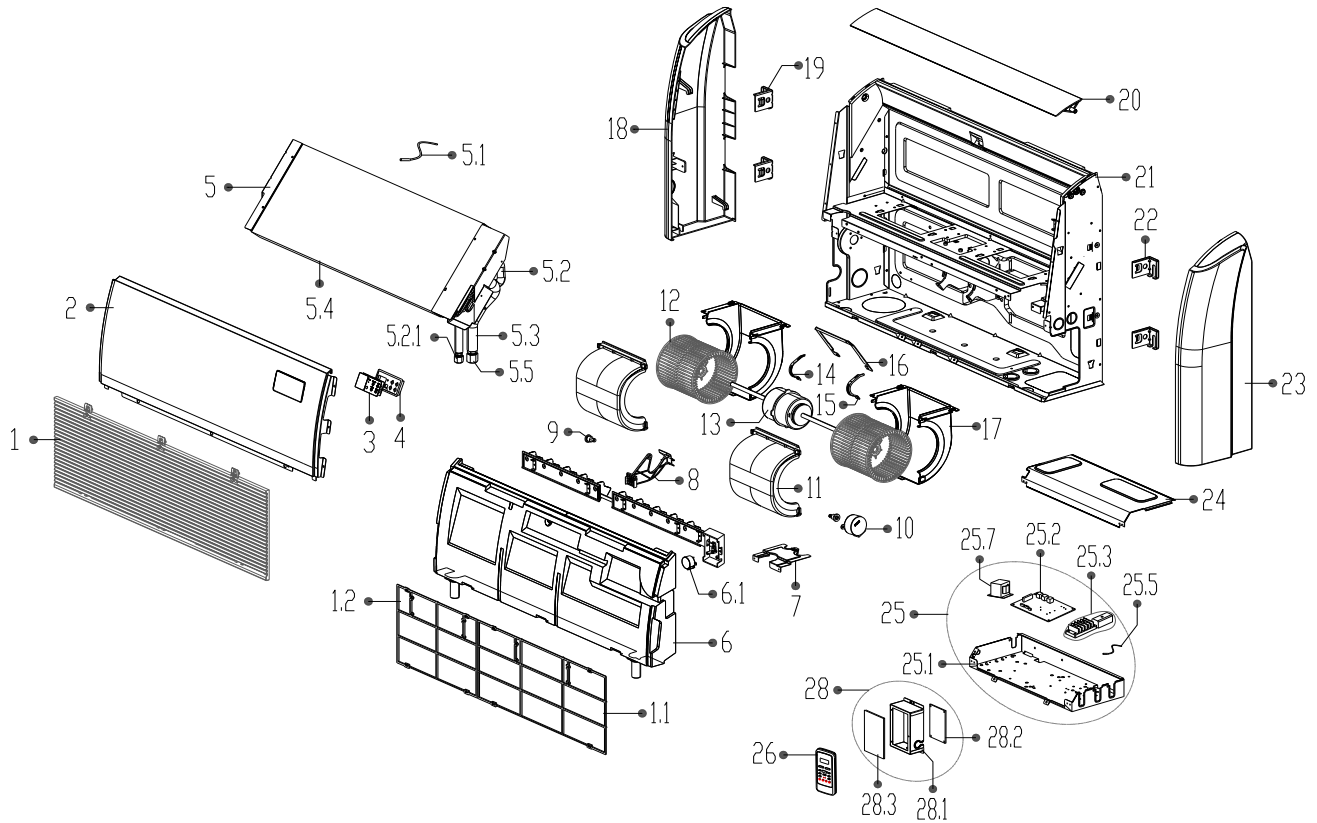
	Name	Shape	Quantity
Remote controller & Its holder(The product you have might not be provided the following accessories)	1. Remote controller		1
	2. Remote controller holder		1
	3. Mounting screw (ST2.9×10-C-H)		2
	4. Alkaline dry batteries (AM4)		2
Others	5. Owner's manual		1
	6. Installation manual		1
	7. Remote controller manual		1

8. The Specification of Power

Capacity(Btu/h)		18000-24000	30000	36000	36000	48000
Indoor Unit Power	Phase	1-phase	1-phase	1-phase	1-phase	1-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz
	Power Wiring(mm ²)	3×1.0	3×1.0	3×1.0	3×1.0	3×1.0
	Circuit Breaker/ Fuse (A)	15/10	15/10	15/10	15/10	15/10
Outdoor Unit Power	Phase	1-phase	1-phase	1-phase	3-phase	3-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz	220-240V, 50Hz	380-415V, 50Hz	380-415V, 50Hz
	Power Wiring(mm ²)	3×2.5	3×2.5	3×4.0	5×2.5	5×2.5
	Circuit Breaker/ Fuse (A)	30/20	40/30	40/30	30/20	30/25
Indoor/Outdoor Connecting Wiring(Weak Electric Signal) (mm ²)		3×0.5	3×0.5	3×0.5	3×0.5	3×0.5
Indoor/Outdoor Connecting Wiring(Strong Electric Signal) (mm ²)		————	————	————	————	————

10. Exploded View and Spare Part list

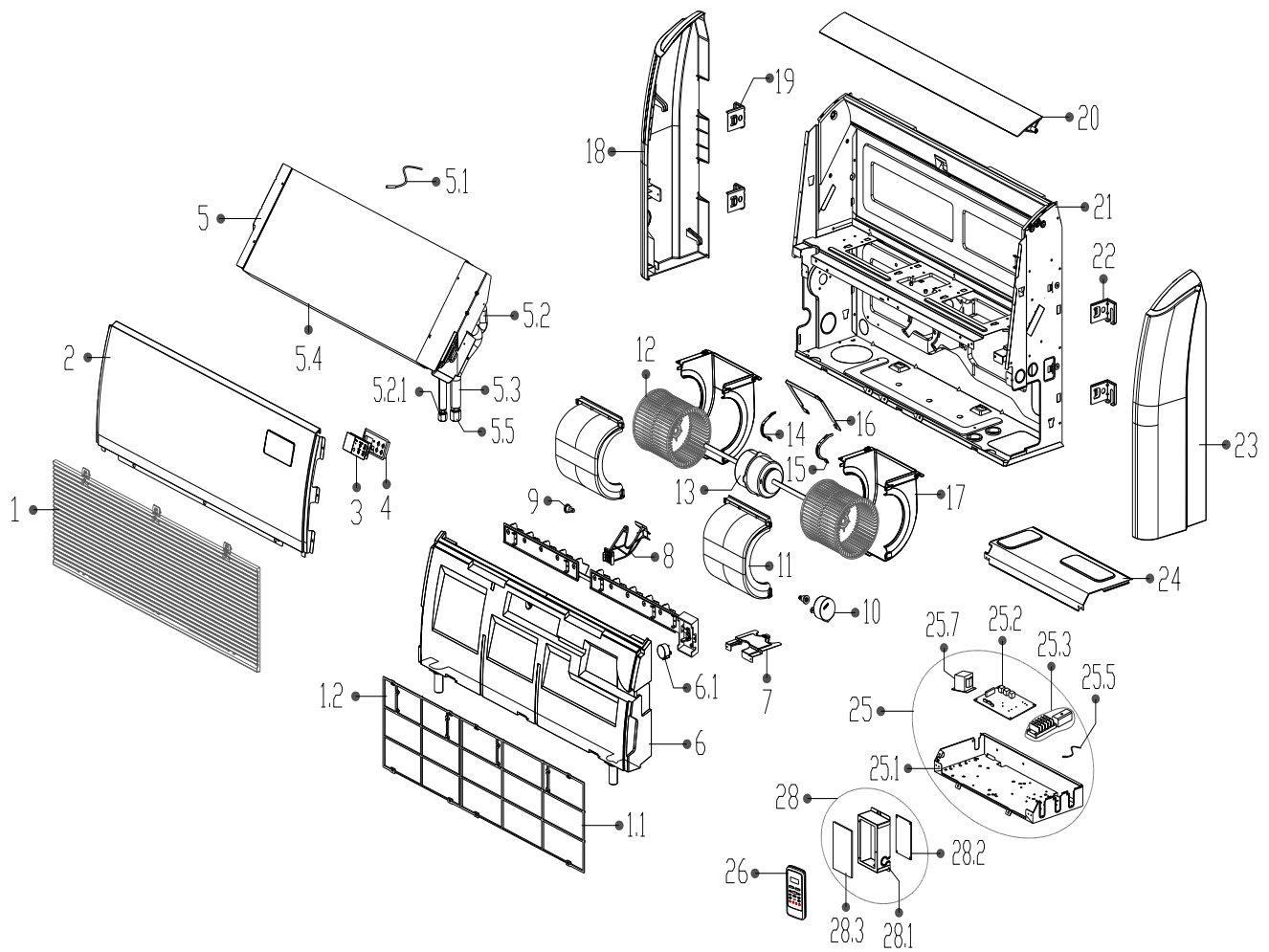
Exploded View of indoor unit: AWSI-TBD018-N11



Spare part list of indoor unit: AWSI-TBD018-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Air inlet grille assembly I	1	201144290054	14	Fan motor axes clamp (right)	1	201280200006
1.1	Air filter I	1	201144790024	15	Fan motor axes clamp (left)	1	201280200005
1.2	Air filter II	1	201144790023	16	Fan motor fixing board	1	201252490002
2	Top cover assembly	1	201244290052	17	Volute shell (below)	2	201144690033
3	Display board assembly	1	201344790040	18	Right cover	1	201144790017
4	Display installation box	1	201144790016	19	Right hook	2	201244790033
5	Evaporator assembly	1	201544190036	20	Louver	1	201144290056
5.1	Pipe temperature sensor assembly	1	202301300804	21	Chassis assembly	1	201244290053
5.1	Pipe temperature sensor assembly	1	202301300111	22	Left hook	2	201244790034
5.2	Input pipe assembly	1	201644190055	23	Left cover	1	201144790019
5.2.1	Copper nut	1	201600320000	24	Cover of electronic control box	1	201244490048
5.3	Output pipe assembly	1	201644190053	25	Electronic control box assembly	1	203344290030
5.4	Evaporator	1	201544290182	25.1	Electronic control box	1	201244790050
5.5	Copper nut	1	201600320002	25.2	Main control board assembly	1	201344290050
6	Water collector	1	202244290014	25.3	Wire joint	1	202301450042
6.1	Louver motor (vertical)	1	202400200100	25.3	Wire joint	1	202301450125
7	Pipe clamp board	1	201244790047	25.5	Ambient temperature sensor assembly	1	202301310072
8	Supporter of louver	1	201144790018	25.7	Reactance	1	202301000950
9	Insulated axis	2	201132590888	26	Remote controller	1	203355091492
10	Louver motor	1	202400200162	28	Electronic control box assembly	1	203319900795
11	Volute shell (above)	2	201144690032	28.1	Electronic control box	1	201270590340
12	Centrifugal fan	2	201144690083	28.2	Inverter control board assembly	1	201319903056
13	Asynchronous motor	1	202400300447	28.3	Radiator	1	202301900138

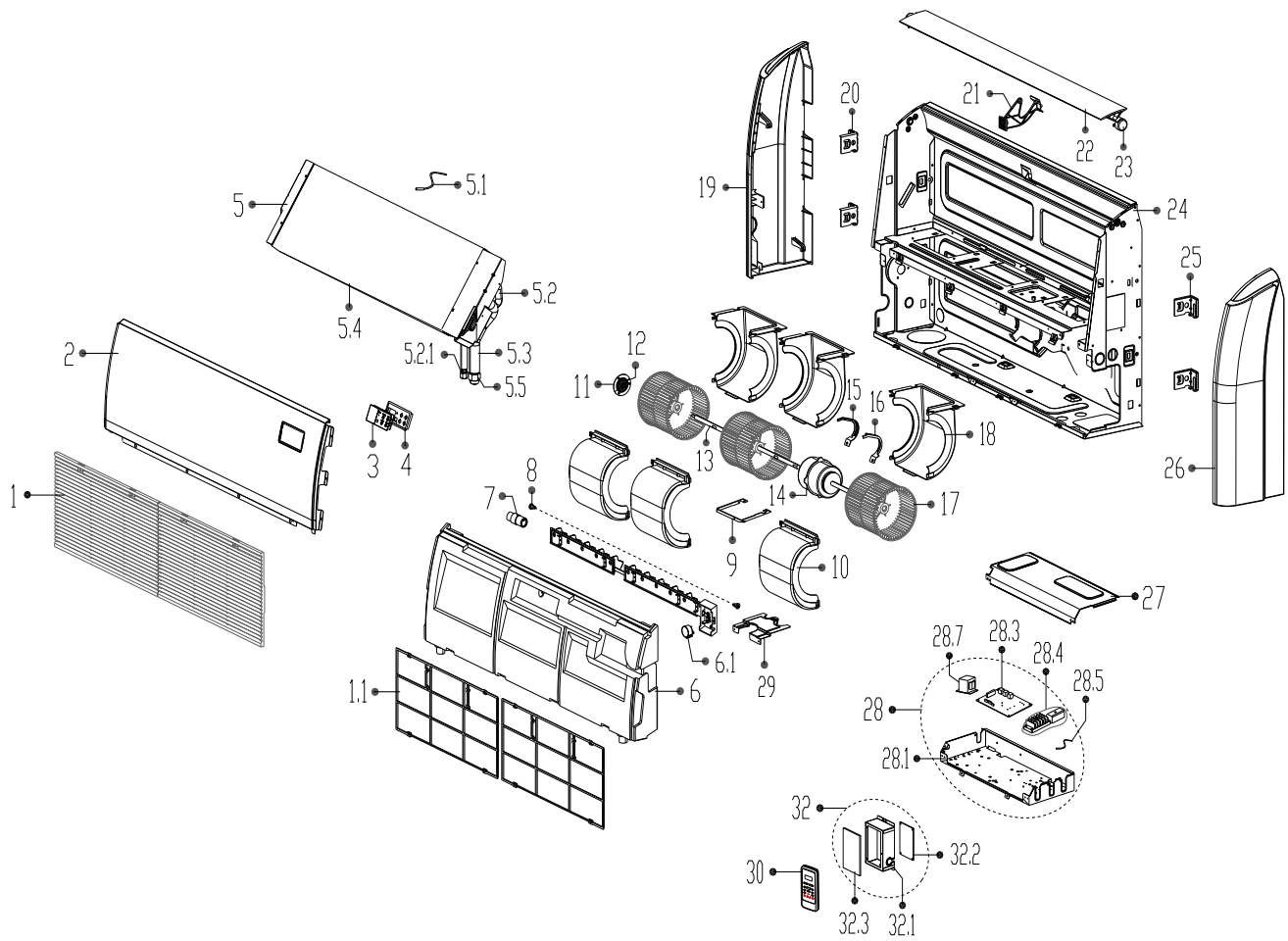
Exploded View of indoor unit: AWSI-TBD024-N11



Spare part list of indoor unit:AWSI-TBD024-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Air inlet grille assembly I	1	201144290054	14	Fan motor axes clamp (right)	1	201280200006
1.1	Air filter I	1	201144790024	15	Fan motor axes clamp (left)	1	201280200005
1.2	Air filter II	1	201144790023	16	Fan motor fixing board	1	201252490002
2	Top cover assembly	1	2012442A0012	17	Volute shell (below)	2	201144690033
3	Display board assembly	1	2013447A0064	18	Right cover	1	201144790017
4	Display installation box	1	2011447A0009	19	Right hook	2	201244790033
5	Evaporator assembly	1	201544290181	20	Louver	1	201144290056
5.1	Pipe temperature sensor assembly	1	202301300804	21	Chassis assembly	1	201244290053
5.1	Pipe temperature sensor assembly	1	202301300111	22	Left hook	2	201244790034
5.2	Input pipe assembly	1	201644290197	23	Left cover	1	201144790019
5.2.1	Copper nut	1	201600320001	24	Cover of electronic control box	1	201244490048
5.3	Output pipe assembly	1	201644290196	25	Electronic control box assembly	1	203344290030
5.4	Evaporator	1	201544290182	25.1	Electronic control box	1	201244790050
5.5	Copper nut	1	201600320003	25.2	Main control board assembly	1	201344290050
6	Water collector	1	202244290014	25.3	Wire joint	1	202301450042
6.1	Louver motor (vertical)	1	202400200100	25.3	Wire joint	1	202301450125
7	Pipe clamp board	1	201244790047	25.5	Ambient temperature sensor assembly	1	202301310072
8	Supporter of louver	1	201144790018	25.7	Reactance	1	202301000950
9	Insulated axis	2	201132590888	26	Remote controller	1	203355091552
10	Louver motor	1	202400200162	28	Electronic control box assembly	1	203319900795
11	Volute shell (above)	2	201144690032	28.1	Electronic control box	1	201270590340
12	Centrifugal fan	2	201144690083	28.2	Inverter control board assembly	1	201319903056
13	Asynchronous motor	1	202400300447	28.3	Radiator	1	202301900138

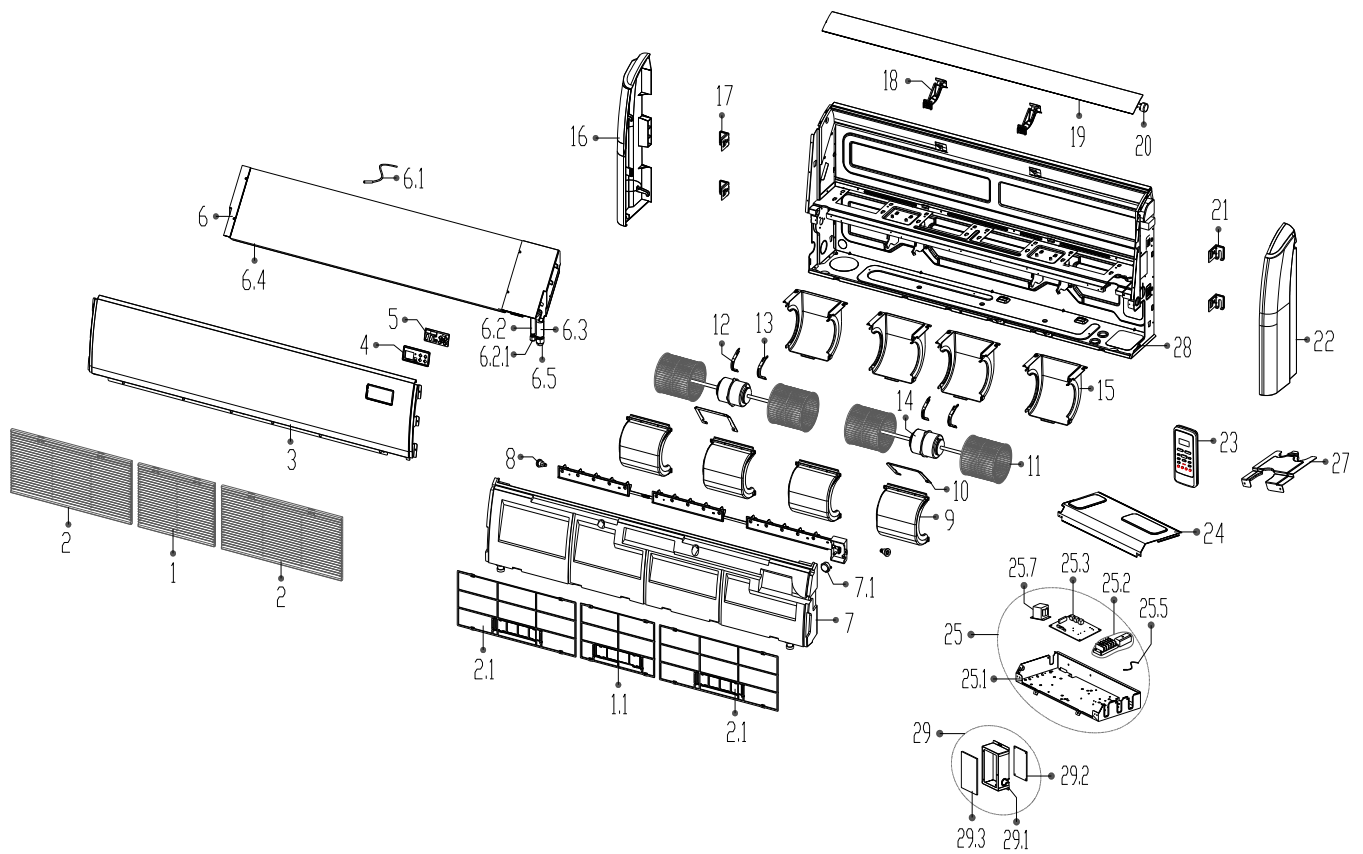
Exploded View of indoor unit:AWSI-TBD030-N11



Spare part list of indoor unit:AWSI-TBD030-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Air inlet grille assembly I	2	201144790015	17	Centrifugal fan	3	201144690083
1.1	Air filter I	1	201144790024	18	Volute shell (below)	3	201144690033
2	Top cover assembly	1	2012444A0012	19	Right cover	1	201144790017
3	Display board assembly	1	2013447A0064	20	Right hook	2	201244790033
4	Display installation box	1	2011447A0009	21	Supporter of louver	1	201144790018
5	Evaporator assembly	1	201544490266	22	Louver	1	201144490040
5.1	Pipe temperature sensor assembly	1	202301300804	23	Louver motor	1	202400200162
5.1	Pipe temperature sensor assembly	1	202301300111	24	Chassis assembly	1	201244490052
5.2	Input pipe assembly	1	201644690252	25	Left hook	2	201244790034
5.2.1	Copper nut	1	201600320001	26	Left cover	1	201144790019
5.3	Output pipe assembly	1	201644490324	27	Cover of electronic control box	1	201244490048
5.4	Evaporator	1	201544690174	28	Electronic control box assembly	1	203344290030
5.5	Copper nut	1	201600320003	28.1	Electronic control box	1	201244790050
6	Water collector	1	202244490015	28.3	Main control board assembly	1	201344290050
6.1	Louver (vertical) motor	1	202400200100	28.4	Wire joint	1	202301450042
7	Coupling	1	202970790001	28.4	Wire joint	1	202301450125
8	Insulated axis	2	201132590888	28.5	Ambient temperature sensor assembly	1	202301310072
9	Fan motor fixing board	1	201252490002	28.7	Reactance	1	202301000950
10	Volute shell (above)	3	201144690032	29	Pipe clamp board	1	201244790047
11	Bearing fixing board	1	201287000011	30	Remote controller	1	203355091552
12	Bearing base	1	202732400001	32	Electronic control box assembly	1	203319900796
13	Connecting shaft	1	202501180103	32.1	Electronic control box	1	201270590340
14	Asynchronous motor	1	202400300512	32.2	Inverter control board assembly	1	201319903060
15	Fan motor axes clamp (right)	1	201280200006	32.3	Radiator	1	202301900138
16	Fan motor axes clamp (left)	1	201280200005				

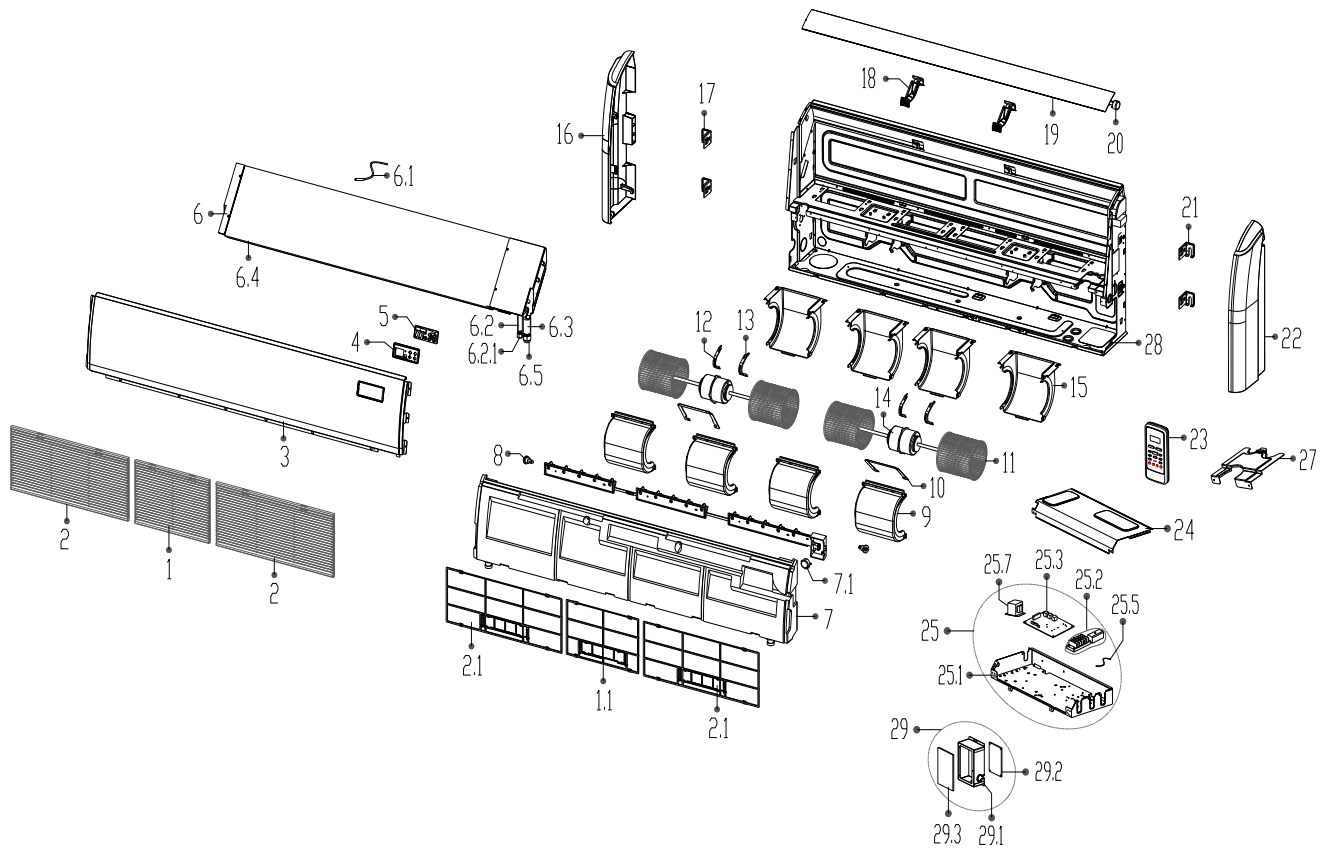
Exploded View of indoor unit:AWSI-TBD036-N11



Spare part list of indoor unit:AWSI-TBD036-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Air inlet grille assembly II	1	201144790014	15	Volute shell (below)	4	201144690033
1.1	Air filter I	1	201144790023	16	Right cover	1	201144790017
2	Air inlet grille assembly I	2	201144790015	17	Right hook	2	201244790033
2.1	Air filter II	1	201144790024	18	Supporter of louver	2	201144790018
3	Top cover assembly	1	2012447A0016	19	Louver	1	201144790006
4	Display installation box	1	2011447A0009	20	Louver motor	1	202400200162
5	Display assembly board	1	2013447A0064	21	Left hook	2	201244790034
6	Evaporator assembly	1	201544790144	22	Left cover	1	201144790019
6.1	Pipe temperature sensor assembly	1	202301300804	23	Remote controller	1	203355091552
6.1	Pipe temperature sensor assembly	1	202301300111	24	Cover of electronic control box	1	201244490048
6.2	Input pipe assembly	1	201644790189	25	Electronic control box assembly	1	203344490068
6.2.1	Copper nut	1	201600320001	25.1	Electronic control box	1	201244790050
6.3	Output pipe assembly	1	201644790192	25.2	Wire joint	1	202301450116
6.4	Evaporator	1	201544790139	25.2	Wire joint	1	202301450125
6.5	Copper nut	1	201600320003	25.3	Main control board assembly	1	201344490054
7	Water collector	1	202244790001	25.5	Ambient temperature sensor assembly	1	202301310072
7.1	Louver motor	1	202400200100	25.7	Reactor	1	202301000950
8	Insulated axis	2	201132590888	27	Pipe clamp board	1	201244790047
9	Volute shell (above)	4	201144690032	28	Chassis assembly	1	201244690053
10	Fan motor fixing board	2	201252490002	29	Electronic control box assembly	2	203319900796
11	Centrifugal fan	4	201144690083	29.1	Electronic control box	1	201270590340
12	Fan motor axes clamp	2	201280200006	29.2	Inverter control board	1	201319903060
13	Fan motor axes clamp (left)	2	201280200005	29.3	Radiator	1	202301900138
14	Asynchronous motor	2	202400300070				

Exploded View of indoor unit:AWSI-TBD048-N11



Spare part list of indoor unit:AWSI-TBD048-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Air inlet grille assembly II	1	201144790014	15	Volute shell (below)	4	201144690033
1.1	Air filter I	1	201144790023	16	Right cover	1	201144790017
2	Air inlet grille assembly I	2	201144790015	17	Right hook	2	201244790033
2.1	Air filter II	1	201144790024	18	Supporter of louver	2	201144790018
3	Top cover assembly	1	2012447A0016	19	Louver	1	201144790006
4	Display installation box	1	2011447A0009	20	Louver motor	1	202400200162
5	Display assembly board	1	2013447A0064	21	Left hook	2	201244790034
6	Evaporator assembly	1	201544790144	22	Left cover	1	201144790019
6.1	Pipe temperature sensor assembly	1	202301300804	23	Remote controller	1	203355091552
6.1	Pipe temperature sensor assembly	1	202301300111	24	Cover of electronic control box	1	201244490048
6.2	Input pipe assembly	1	201644790189	25	Electronic control box assembly	1	203344490068
6.2.1	Copper nut	1	201600320001	25.1	Electronic control box	1	201244790050
6.3	Output pipe assembly	1	201644790192	25.2	Wire joint	1	202301450116
6.4	Evaporator	1	201544790139	25.2	Wire joint	1	202301450125
6.5	Copper nut	1	201600320003	25.3	Main control board assembly	1	201344490054
7	Water collector	1	202244790001	25.5	Ambient temperature sensor assembly	1	202301310072
7.1	Louver motor	1	202400200100	25.7	Reactor	1	202301000950
8	Insulated axis	2	201132590888	27	Pipe clamp board	1	201244790047
9	Volute shell (above)	4	201144690032	28	Chassis assembly	1	201244690053
10	Fan motor fixing board	2	201252490002	29	Electronic control box assembly	2	203319900796
11	Centrifugal fan	4	201144690083	29.1	Electronic control box	1	201270590340
12	Fan motor axes clamp	2	201280200006	29.2	Inverter control board	1	201319903060
13	Fan motor axes clamp (left)	2	201280200005	29.3	Radiator	1	202301900138
14	Asynchronous motor	2	202400300070				

New Four-way Cassette Type (Compact)

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1. Features

1.1 New panel

- 360°surrounding air outlet design, affords comfortable feeling



1.2 Compact design

- The body size is 570×260×570mm, it's just smaller than the ceiling board, so it's very easy for installation and will not damage the decoration. The panel size is 647×50×647mm.
- The hooks are designed in the four corners of the body, which can save installation space.



1.3 Electric control box built-in design

- The E-box is simply and safely built inside the indoor unit. It's convenient for installation and maintenance. Can check the control part easily, you only need to open the air return grille.

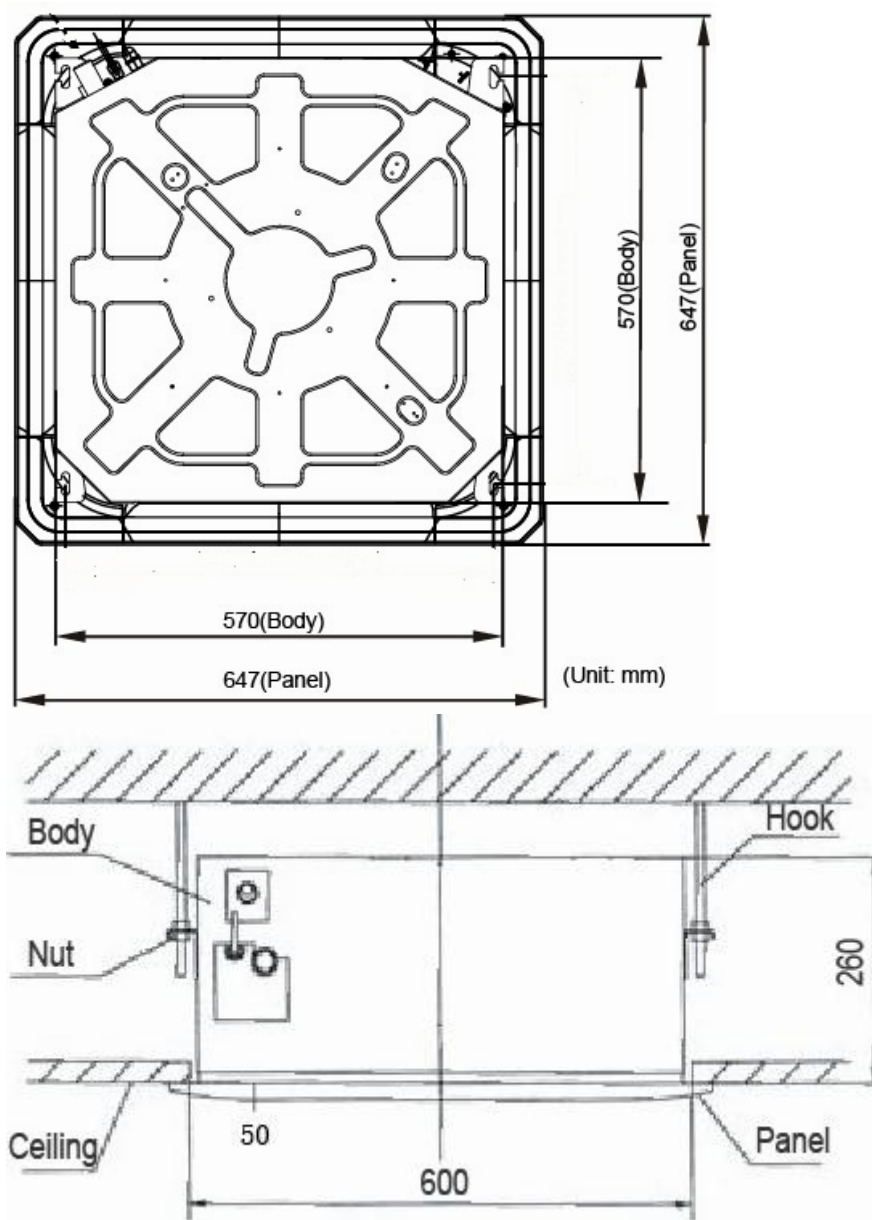


1.4 Air passage function

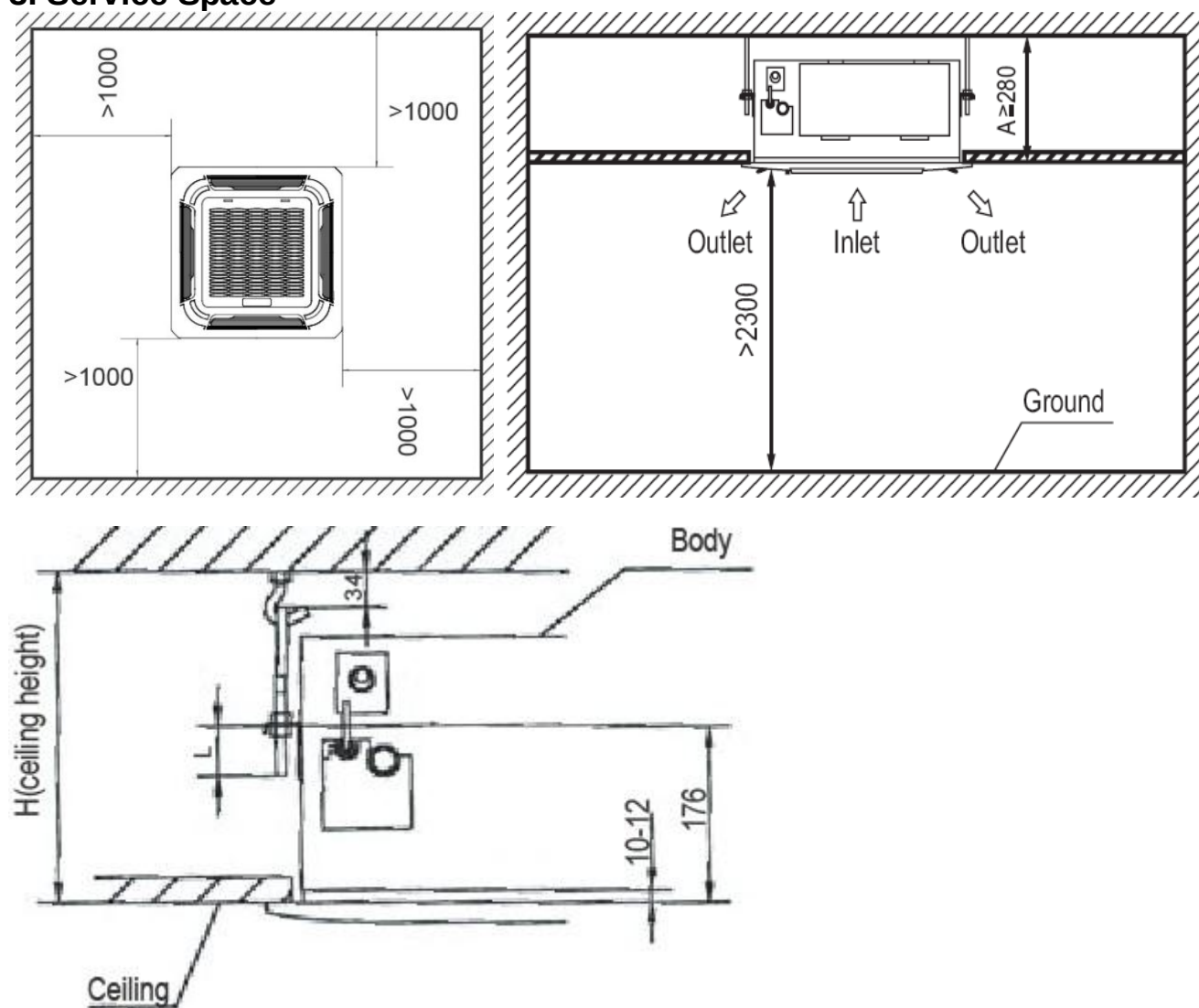
- Reserves the space for air outlet from the side of indoor unit; It's availed to connect air duct from the two sides to the nearby small rooms.



2. Dimensions

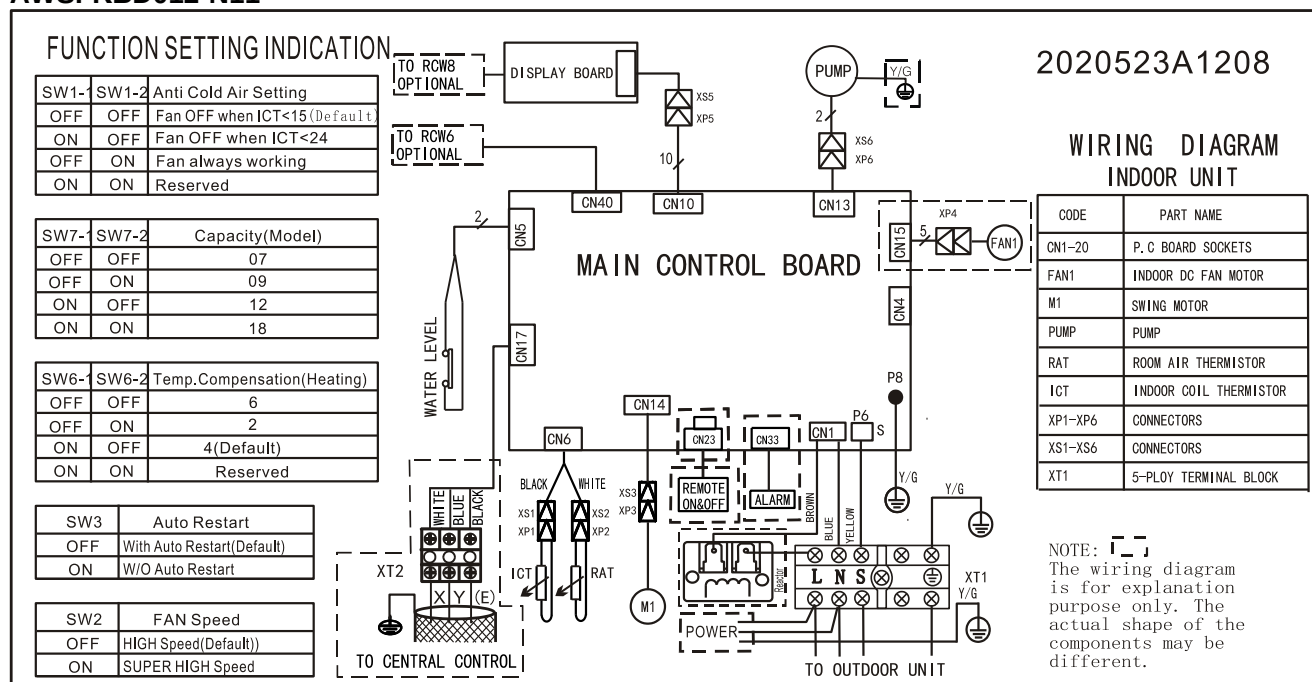


3. Service Space

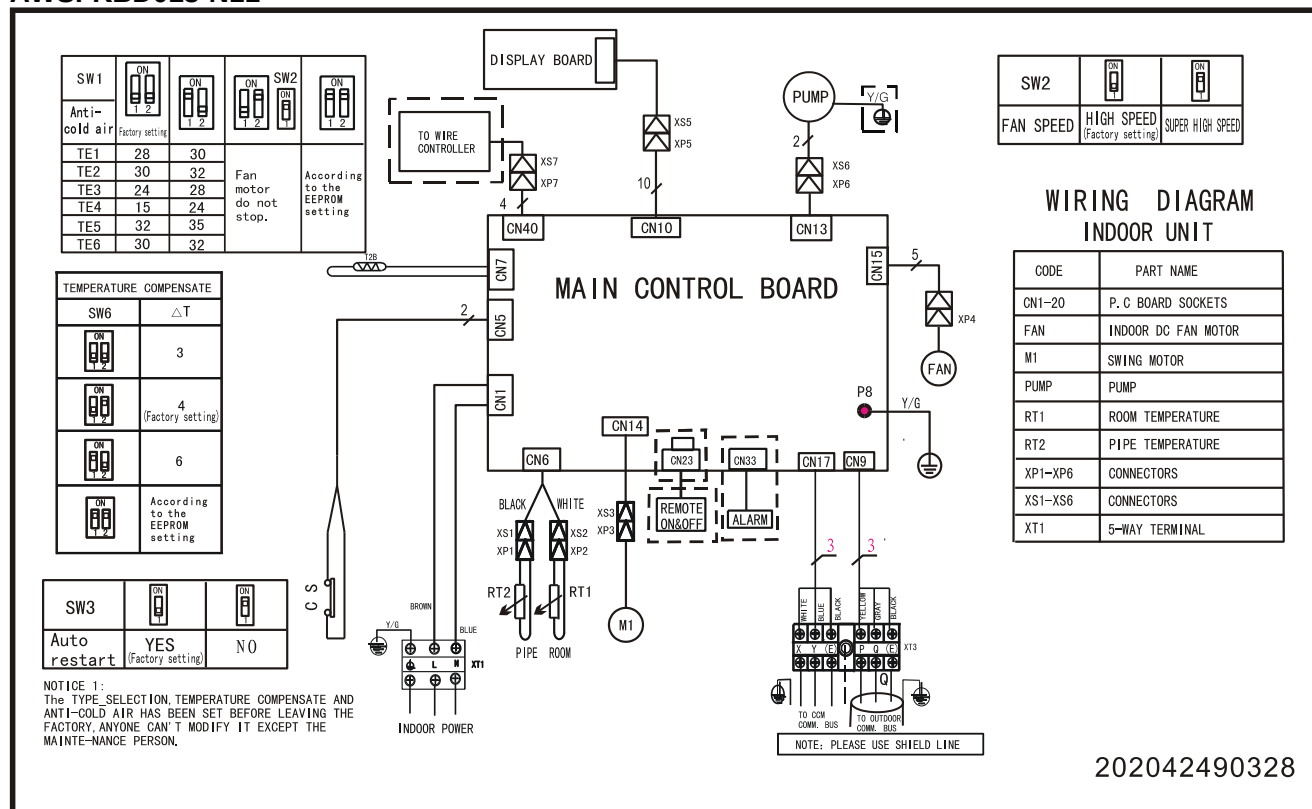


4. Wiring Diagrams

AWSI-KBD012-N11

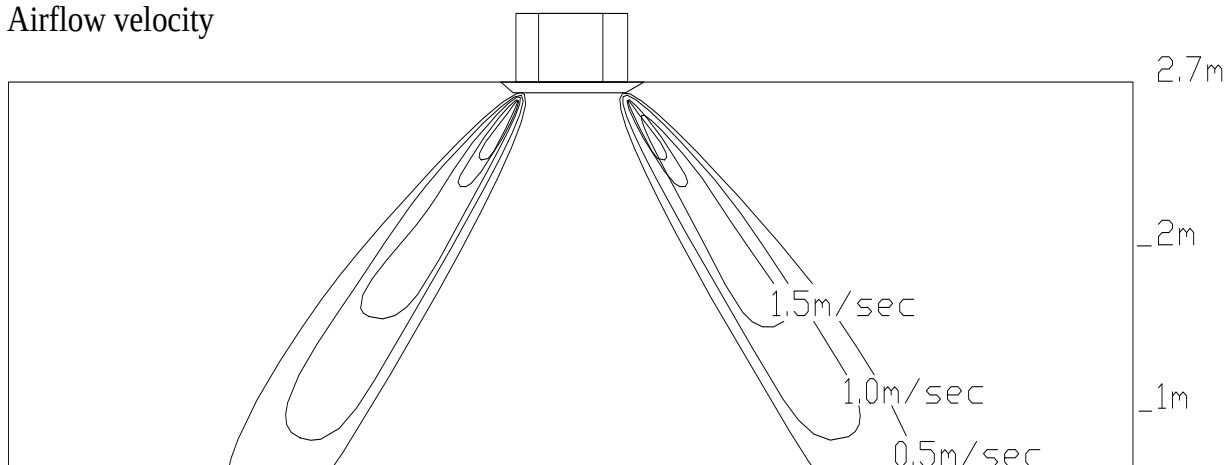


AWSI-KBD018-N11

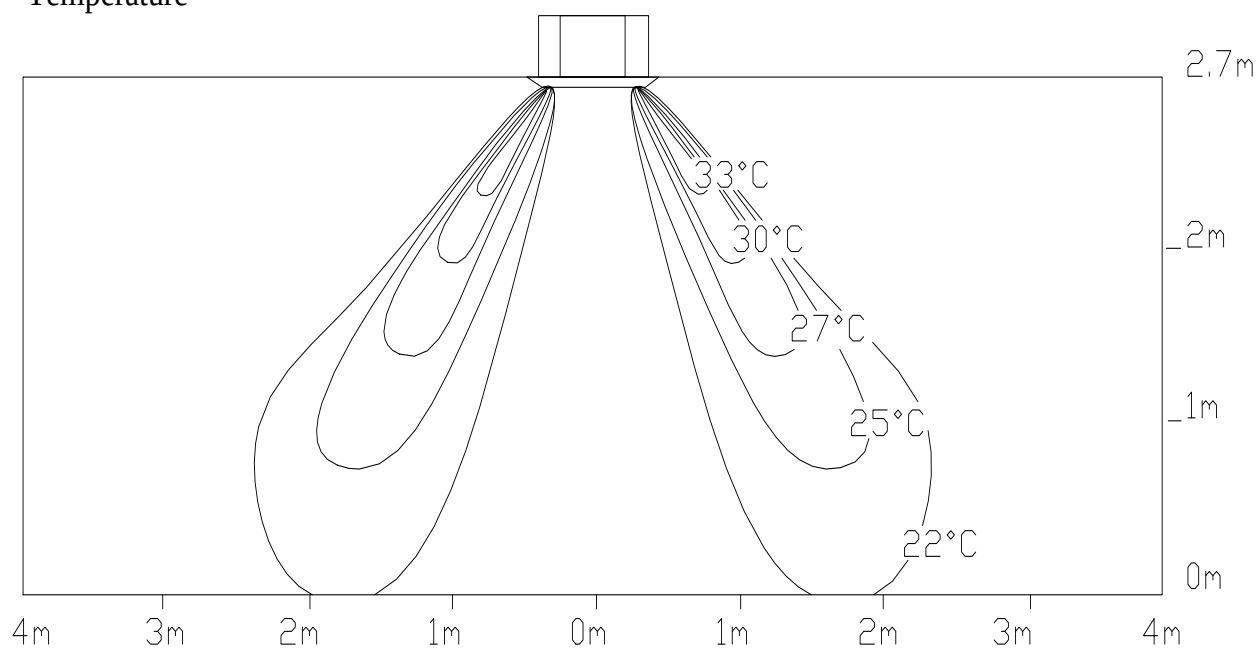


5. Air Velocity and Temperature Distributions(Reference Data)

Airflow velocity



Temperature



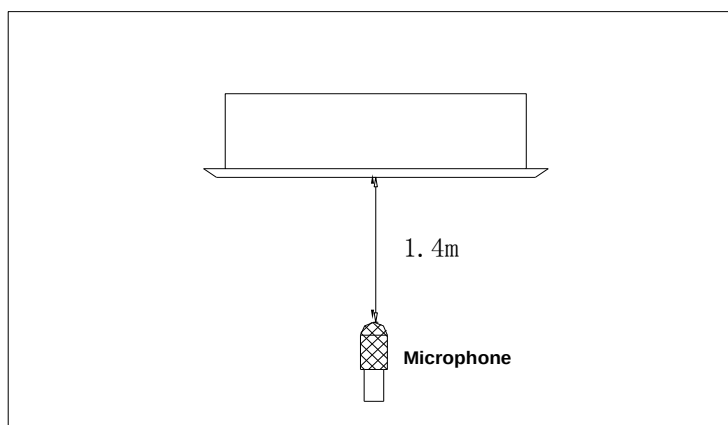
6. Electric Characteristics

Model	Indoor Units				Power Supply
	Hz	Voltage	Min.	Max.	MFA
AWSI-CBD012-N11	50	220-240	198	254	/
AWSI-CBD018-N11	50	220-240	198	254	10

Note :

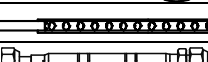
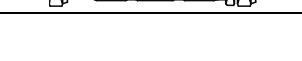
MFA: Max. Fuse Amps. (A)

7. Sound Levels



Model	Noise Power dB(A)	Noise level dB(A)		
		H	M	L
AWSI-CBD012-N11	55	46	43	40
AWSI-CBD018-N11	60	47	43	39

8. Accessories

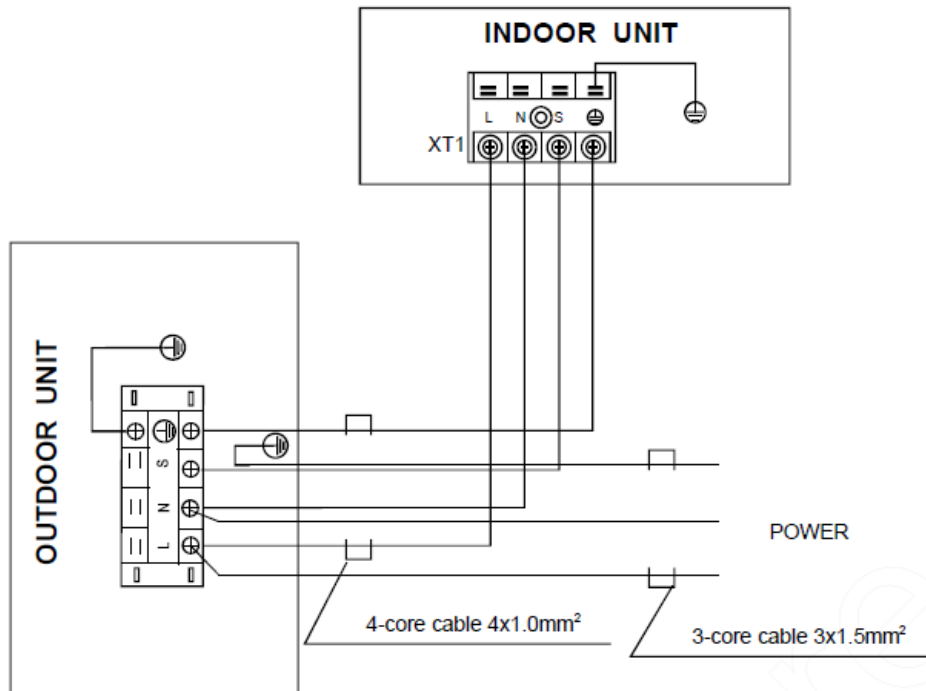
	Name	Shape	Quantity
Installation Fittings	Installation paper board		1
Tubing & Fittings	Soundproof / insulation sheath		1
Drainpipe Fittings	Out-let pipe sheath		1
	Out-let pipe clasp		1
	Drain joint		1
	Seal ring		1
Remote controller & Its Frame (The product you have might not be provided the following accessories)	Remote controller & Its Frame		1
	Remote controller holder		1
	Mounting screw(ST2.9×10-C-H)		2
	Remote controller manual		1
	Alkaline dry batteries (AM4)		2
Others	Owner's manual		1
	Installation manual		1
Installation accessory (The product you have might not be provided the following accessories)	Expansive hook		4
	Installation hook		4
	Orifice		1

9. The Specification of Power

Capacity(Btu/h)		AWSI-KBD012-N11	AWSI-KBD018-N11
Indoor Unit Power	Phase	———	1-phase
	Frequency and Voltage	———	220-240V, 50Hz
	Power Wiring(mm ²)	———	3×1.0
	Circuit Breaker/Fuse (A)	———	15/10
Outdoor Unit Power	Phase	1-phase	1-phase
	Frequency and Voltage	220-240V, 50Hz	220-240V, 50Hz
	Power Wiring(mm ²)	3×1.5	3×2.5
	Circuit Breaker/Fuse (A)	20/16	30/20
Indoor/Outdoor Connecting Wiring(Weak Electric Signal) (mm ²)		———	3×0.2
Indoor/Outdoor Connecting Wiring(Strong Electric Signal) (mm ²)		4×1.0	———

10. Field Wiring

AWSI-KBD012-N11



12000Btu/h(1 PHASE)

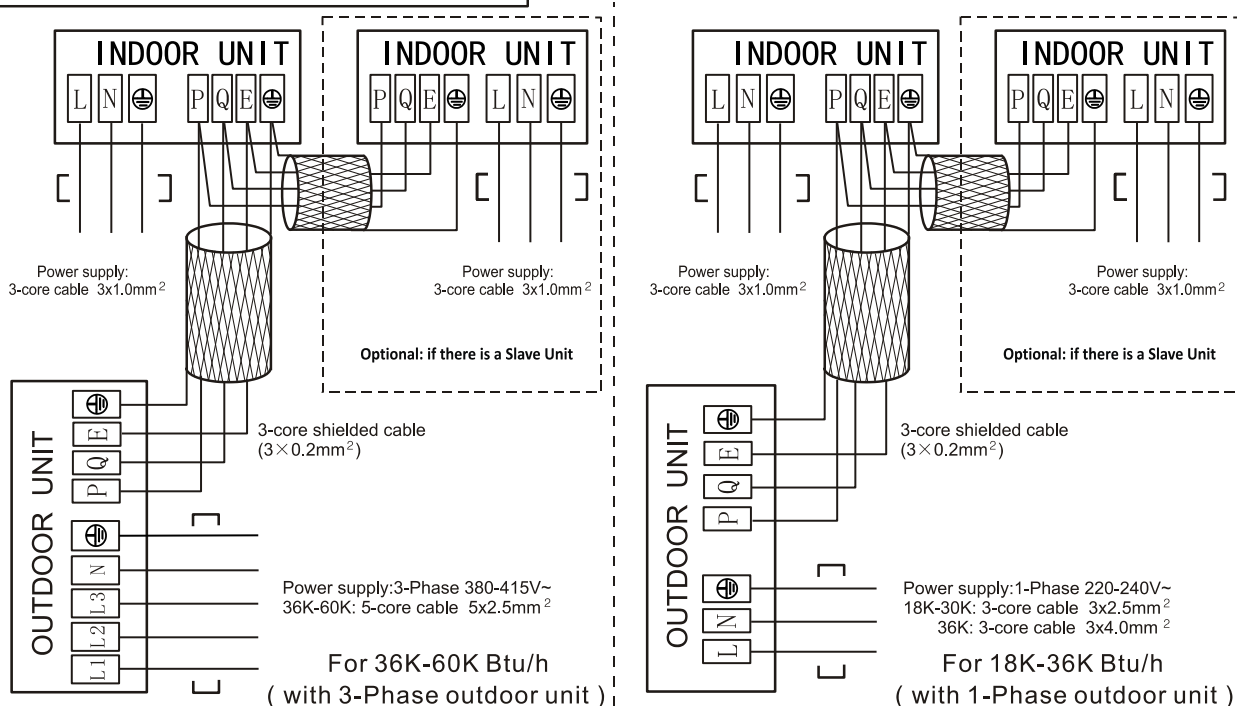
Air Conditioner Link-circuit (For R410a,Cooling& Heating)

NOTE:This wiring diagram indicates outdoor power supplying.

AWSI-KBD018-N11

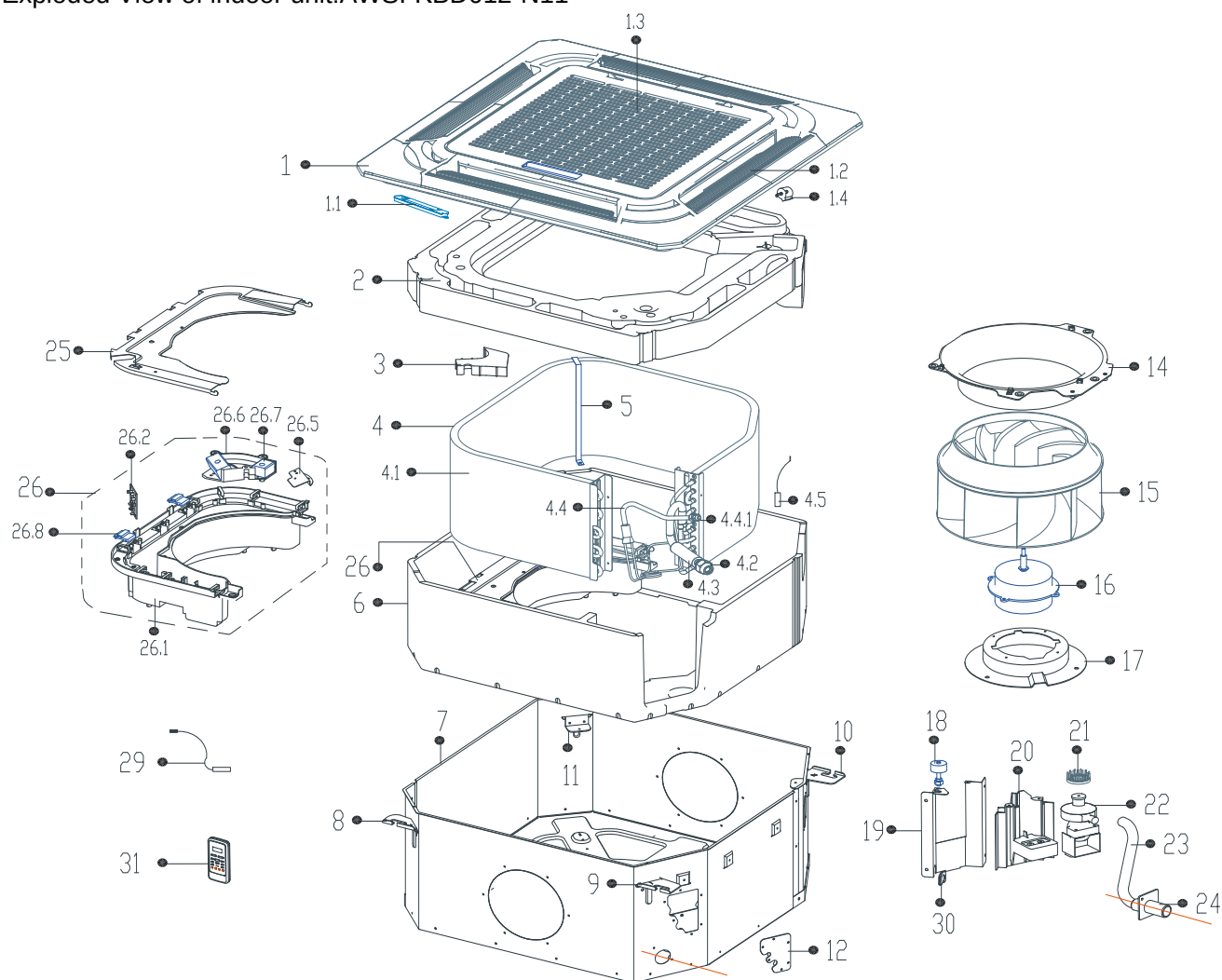
Air Condition Link-Circuit

2020704A0698



11. Exploded View and Spare Part list

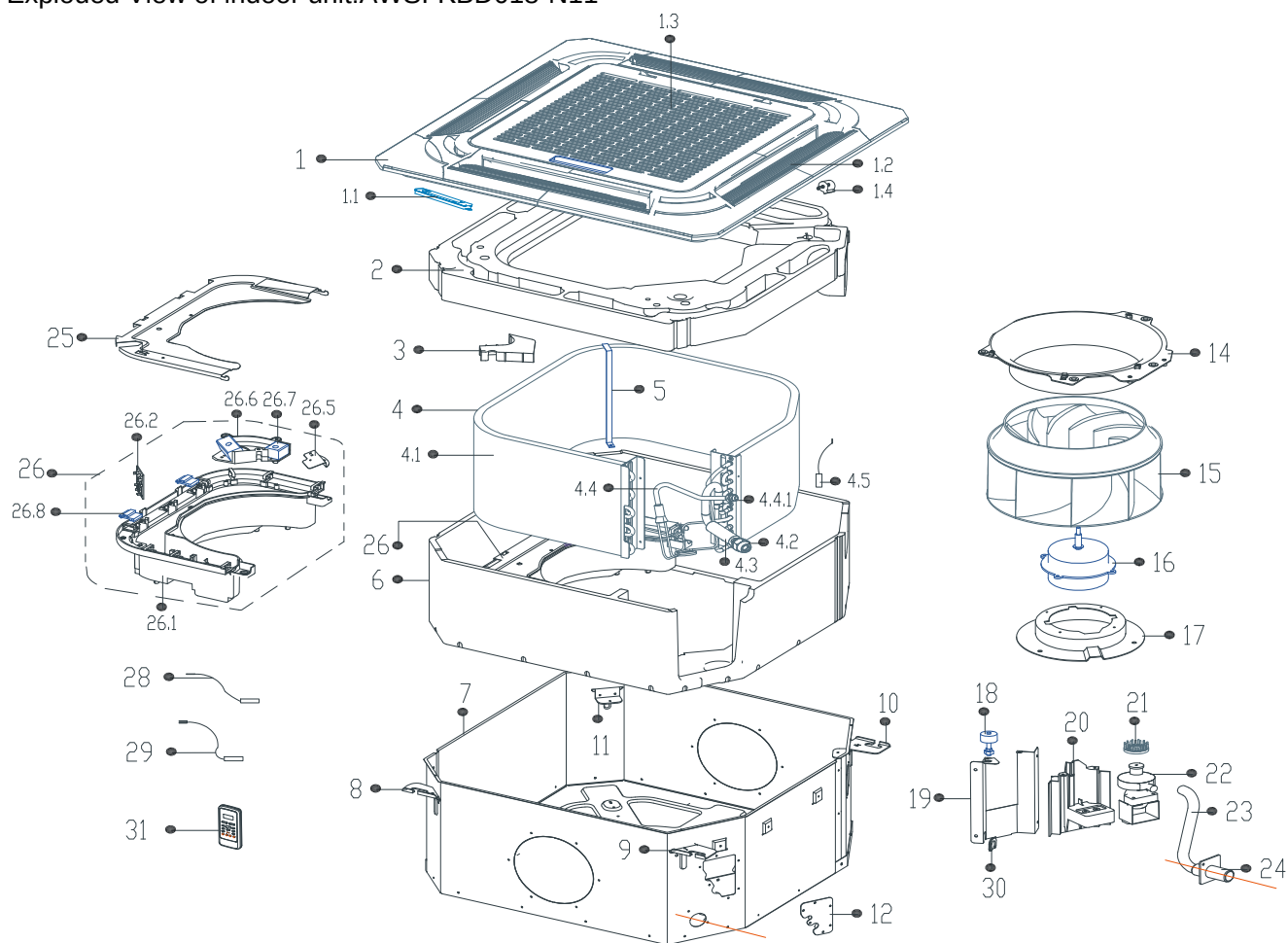
Exploded View of indoor unit:AWSI-KBD012-N11



Spare part list of indoor unit:AWSI-KBD012-N11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Panel	1	2011099A2555	14	Ventilation ring	1	201142390003
1.1	Display box assembly	1	203342090008	15	Centrifugal fan	1	201100100804
1.2	Horizontal louver	4	201109991797	16	Asynchronous motor	1	202400300052
1.3	Air filter	1	P0000453127	17	Fan motor fixing base	1	201280490338
1.4	Louver motor	1	202400280001	18	Water level switch	1	202301800916
2	Water collector	1	202280490006	19	Evaporator fixing board	1	201280490337
3	Wire box	1	201180490047	20	Drain pump installation base	1	201180490049
4	Evaporator assembly	1	201552390007	21	Guard against block up net	1	201180490041
4.1	Evaporator	1	201542390002	22	Drain pump	1	202400600005
4.2	Copper nut	1	201600320001	23	Drain pipe	1	202742390002
4.3	Output pipe assembly	1	201652390020	24	Drain connecting pipe	1	201101030002
4.4	Input pipe assembly	1	201642390001	25	Cover of electronic control box	1	201280490491
4.4.1	Copper nut	1	201600320000	26	Electronic control box assembly	1	203342390100
4.5	Pipe temperature sensor assembly	1	202301300445	26.1	Electronic control box	1	201180490043
5	Evaporator hang board	1	201280490336	26.2	Main control board assembly	1	201342390100
6	Base foam assembly	1	202280490005	26.5	Insulation plate	1	201280490471
7	Chassis assembly	1	201242390003	26.6	Installation base of terminal	1	201180490044
8	Hook II	1	201280490483	26.7	Wire joint	1	202301450119
9	Hook I	1	201280490482	26.8	Clip	3	201180490045
10	Hook IV	1	201280490485	29	Ambient temperature sensor assembly	1	202301310075
11	Hook III	1	201280490484	30	Rubber guard bush	1	202780490007
12	Pipe fixing board assembly	1	201142390001	31	Remote controller	1	203355091552

Exploded View of indoor unit:AWSI-KBD018-N11



Spare part list of indoor unit: AWSI-KBD018-N11

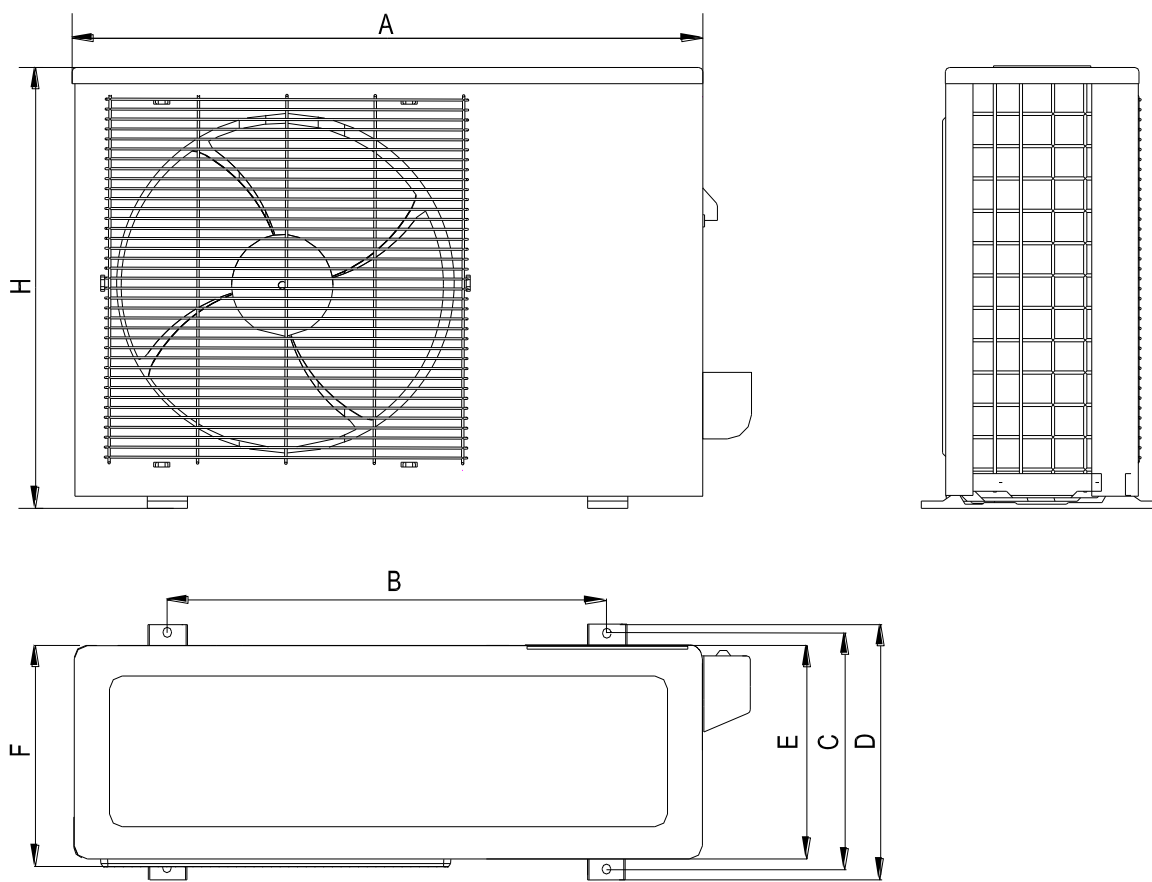
No.	Part Name	Qt v	BOM Code	No.	Part Name	Qt v	BOM Code
1	Panel	1	201109991821	15	Centrifugal fan	1	201100110001
1.1	Display box assembly	1	203342090008	16	Asynchronous motor	1	202400300052
1.2	Horizontal louver	4	201109991797	17	Fan motor fixing base	1	201280490338
1.3	Air filter	1	P0000453127	18	Water level switch	1	202301800916
1.4	Louver motor	1	202400280001	19	Evaporator fixing board	1	201280490337
2	Water collector	1	202280490006	20	Drain pump installation base	1	201180490049
3	Wire box	1	201180490047	21	Guard against block up net	1	201180490041
4	Evaporator assembly	1	201542490008	22	Drain pump	1	202400600005
4.1	Evaporator	1	201542490007	23	Drain pipe	1	202742390002
4.2	Copper nut	1	201600320002	24	Drain connecting pipe	1	201101030002
4.3	Output pipe assembly	1	201642490022	25	Cover of electronic control box	1	201280490491
4.4	Input pipe assembly	1	201642490024	26	Electronic control box assembly	1	203342490043
4.4.1	Copper nut	1	201600320000	26.1	Electronic control box	1	201180490043
4.5	Pipe temperature sensor assembly	1	202301300445	26.2	Main control board assembly	1	201342490049
5	Evaporator hang board	1	201280490336	26.5	Insulation plate	1	201280490471
6	Base foam assembly	1	202280490005	26.6	Installation base of terminal	1	201180490044
7	Chassis assembly	1	201242390003	26.7	Wire joint	1	202301450125
8	Hook II	1	201280490483	26.7	Wire joint	1	202301450121
9	Hook I	1	201280490482	26.8	Clip	3	201180490045
10	Hook IV	1	201280490485	28	Pipe temperature sensor	1	202301300804
11	Hook III	1	201280490484	29	Ambient temperature sensor	1	202301310075
12	Pipe fixing board assembly	1	201142390001	30	Rubber guard bush	1	202780490007
14	Ventilation ring	1	201142390003	31	Remote controller	1	203355091492

Part 3

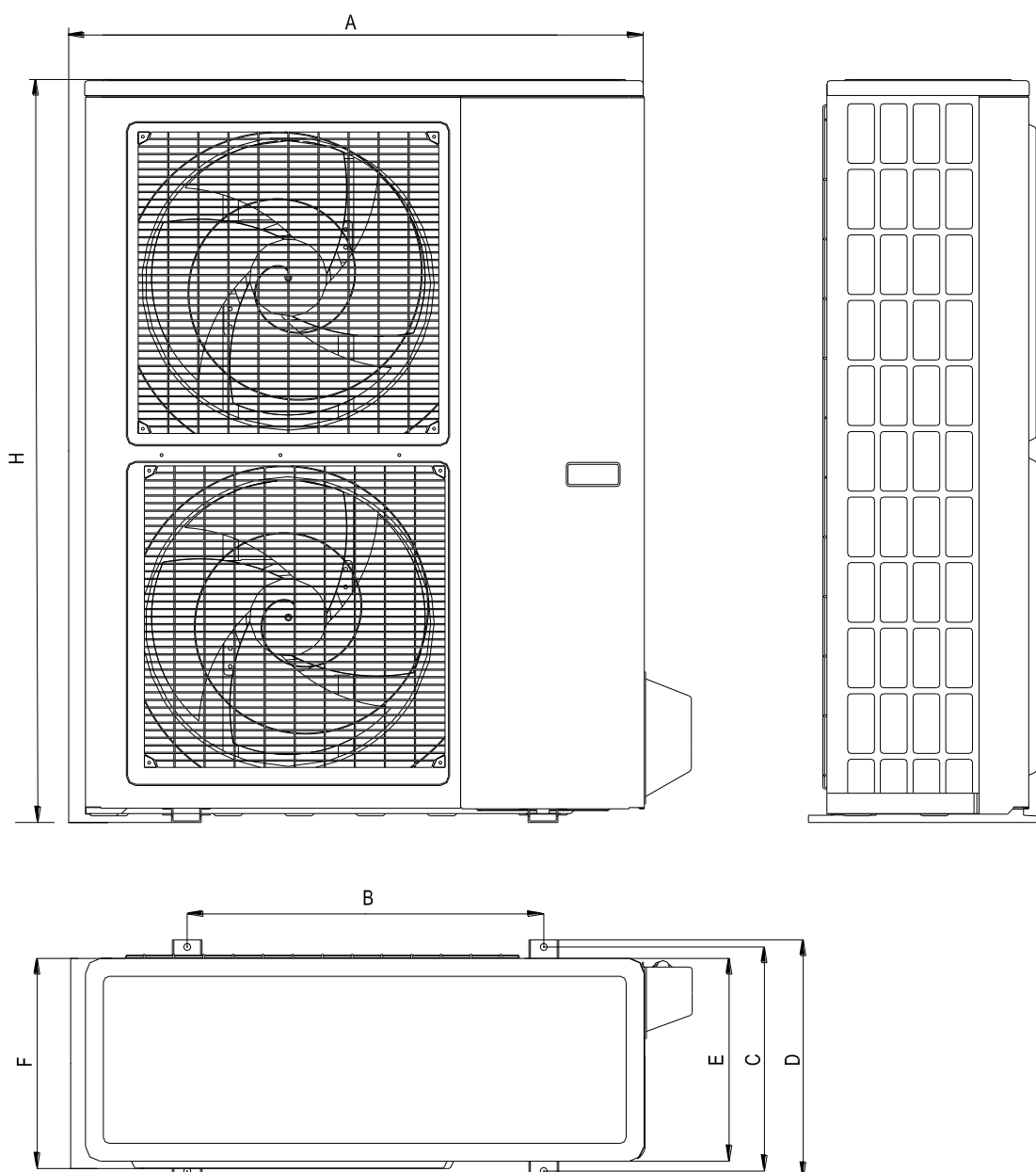
Outdoor Units

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1. Dimensions

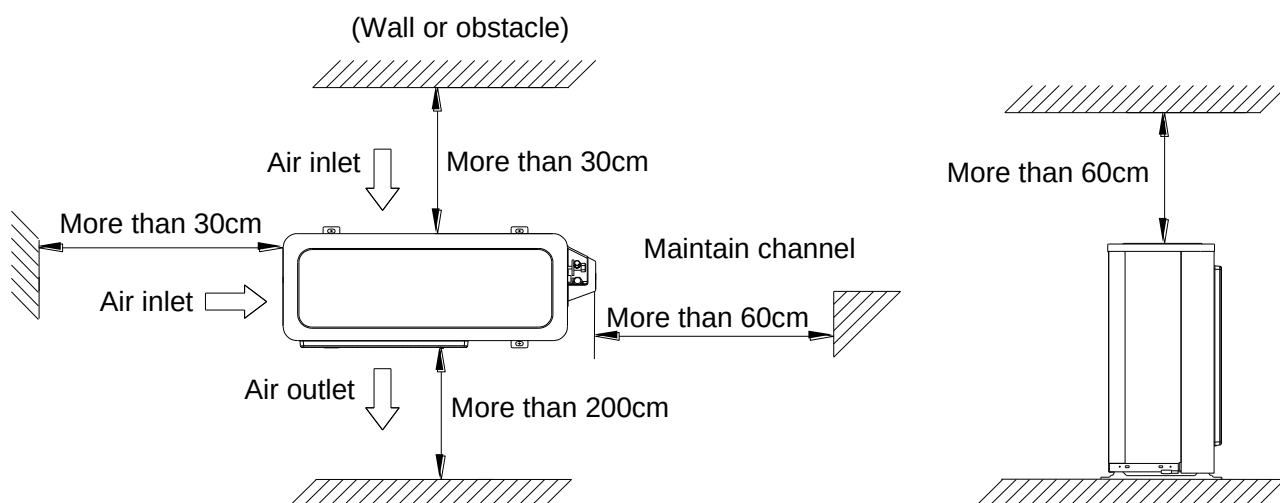


Model	Unit: mm						
	A	B	C	D	E	F	H
AWAU-VLD012-H11	760	530	290	315	270	285	590
AWAU-VLD018-H11	845	560	335	360	312	320	700
AWAU-VLD024-H11	900	590	333	355	302	315	860
AWAU-VLD030-H11	900	590	333	355	302	315	860
AWAU-VLD036-H11	990	624	366	396	340	345	965
AWAU-VLD036-H13	990	624	366	396	340	345	965



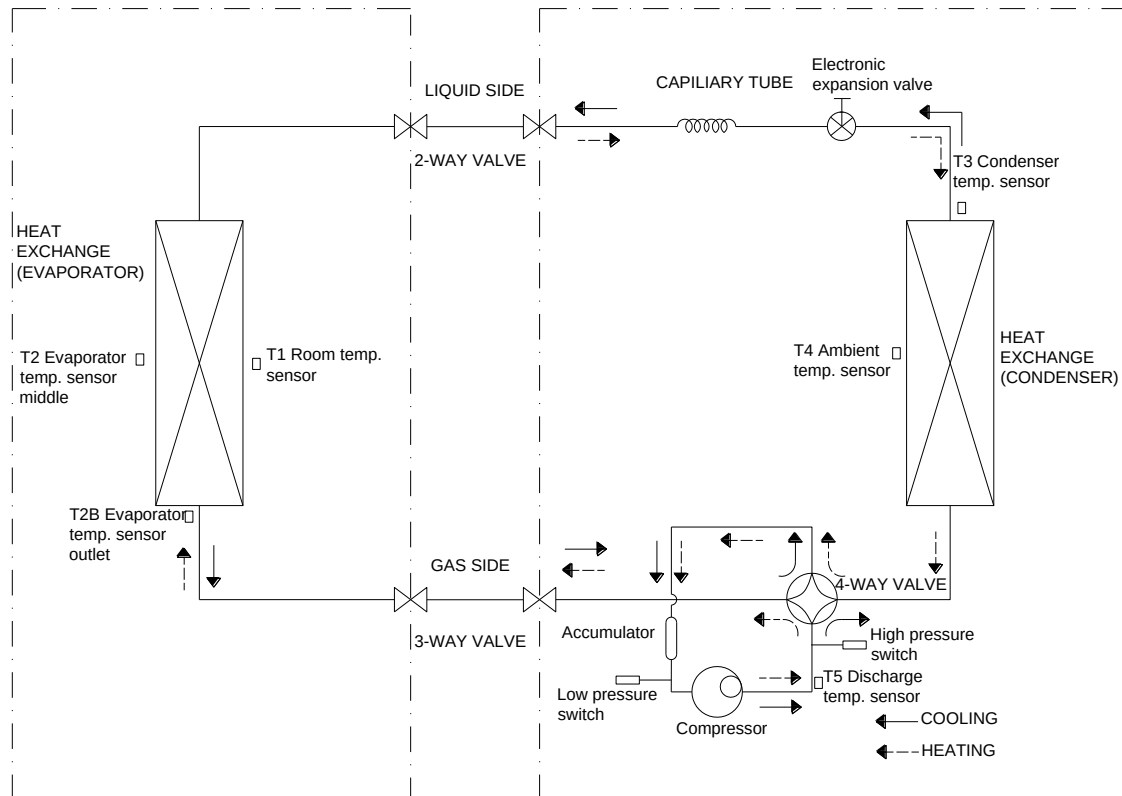
Model	Unit: mm						
	A	B	C	D	E	F	H
AWAU-VLD048-H13	938	633.5	404	448	370	392	1369
AWAU-VLD060-H13	938	633.5	404	448	370	392	1369

2. Service Space

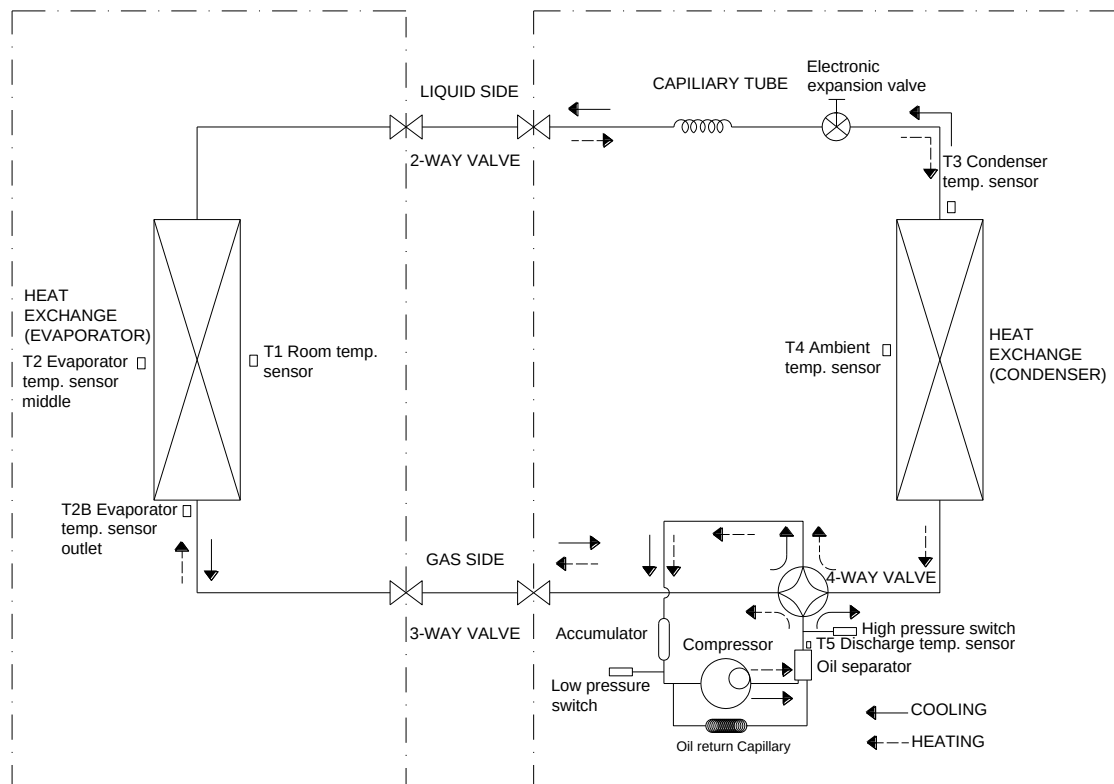


3. Piping Diagrams

AWAU-VLD012-H11

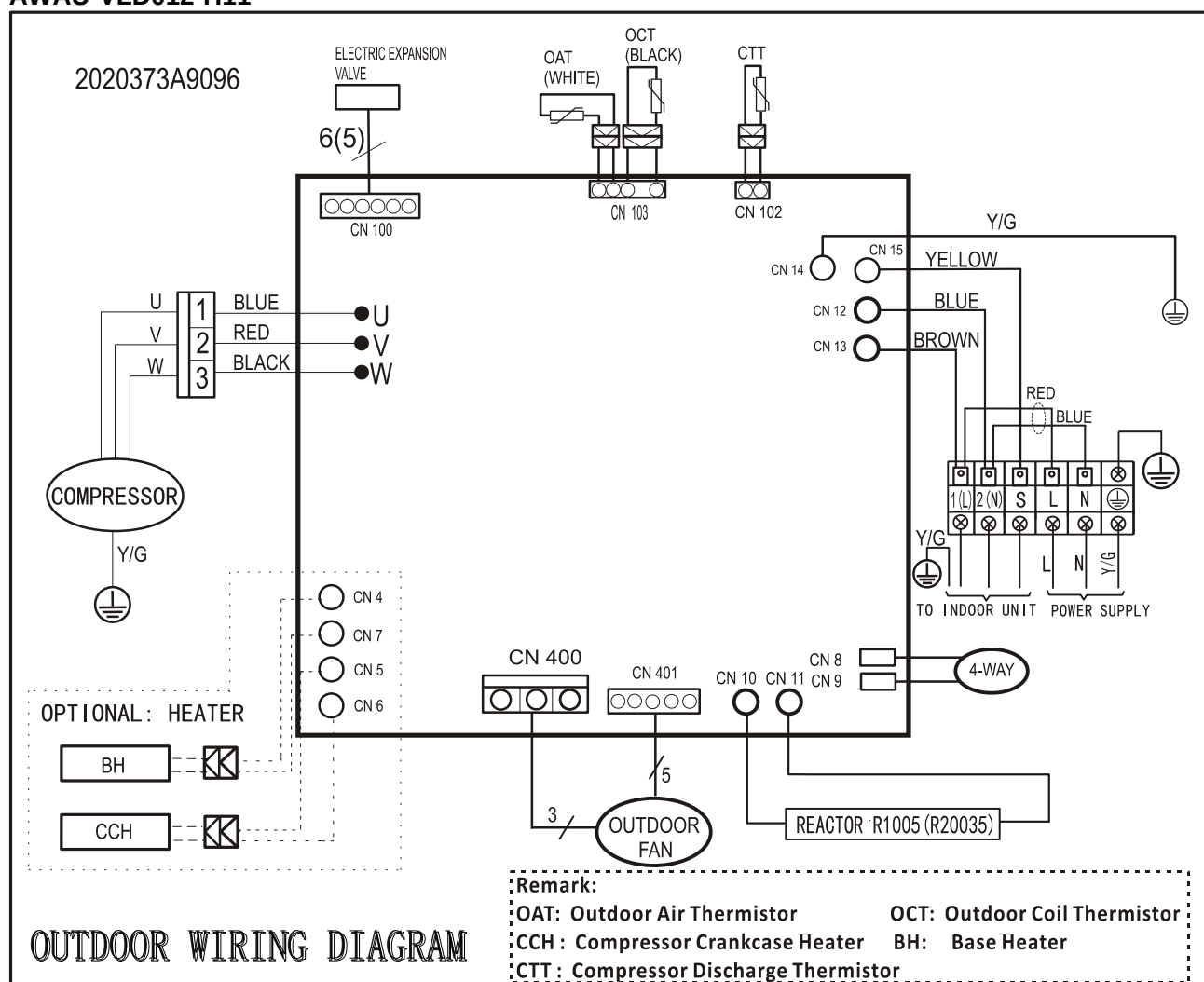
AWAU-VLD018-H11
INDOORAWAU-VLD024-H11
OUTDOORAWAU-VLD030-H11
OUTDOOR

AWAU-VLD036-H11

AWAU-VLD036-H13
INDOORAWAU-VLD048-H13
OUTDOORAWAU-VLD060-H13
OUTDOOR

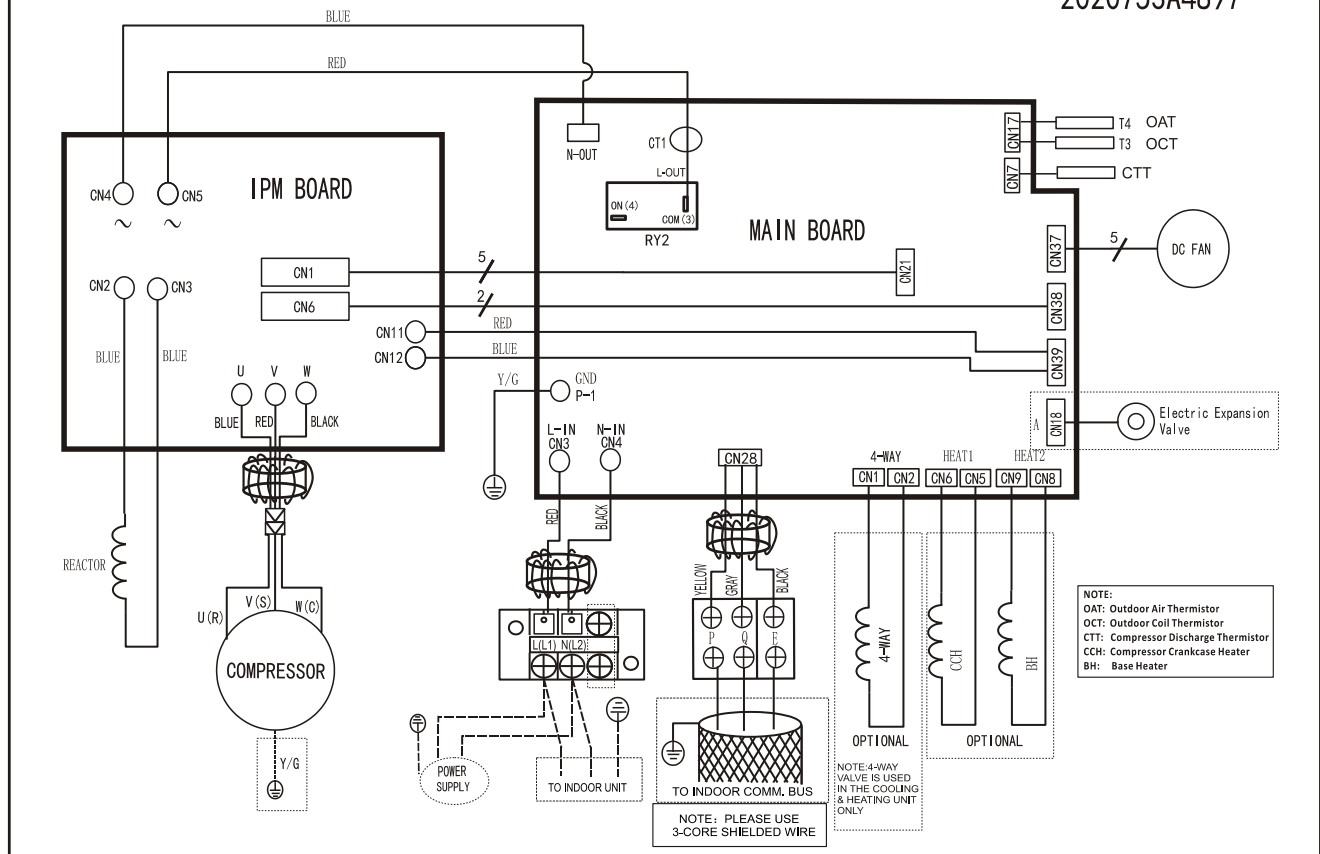
4. Wiring Diagrams

AWAU-VLD012-H11



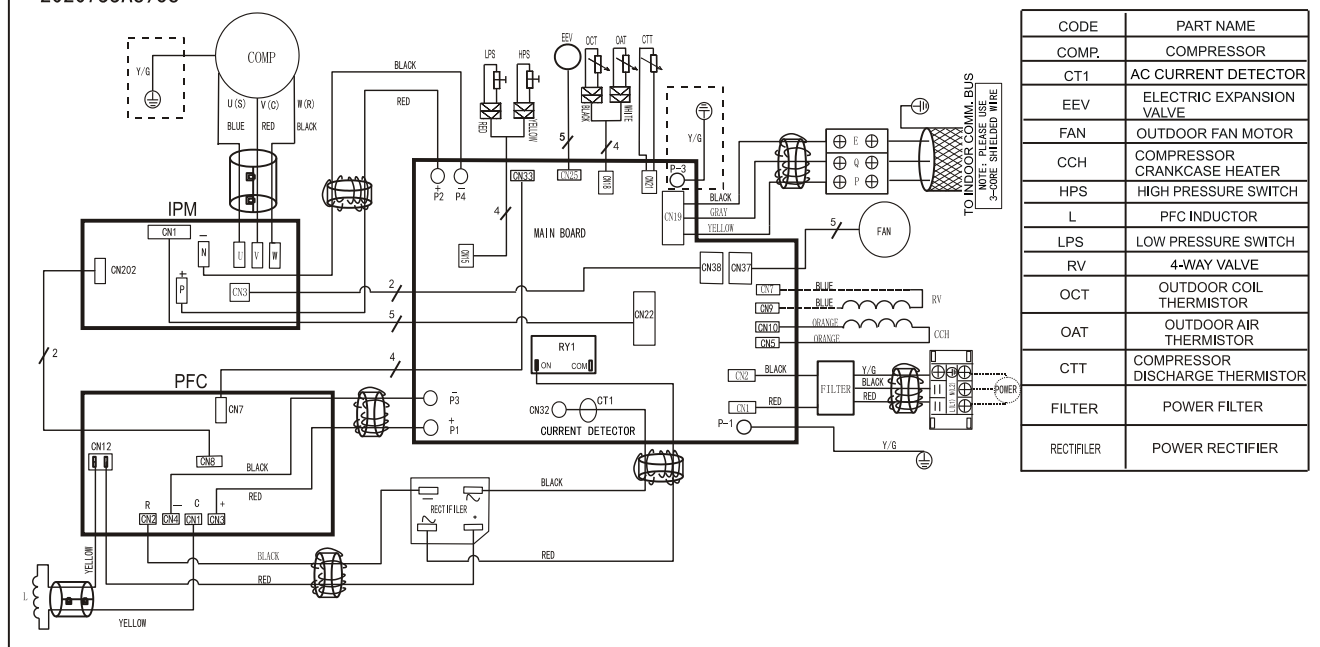
AWAU-VLD018-H11 AWAU-VLD024-H11 AWAU-VLD030-H11

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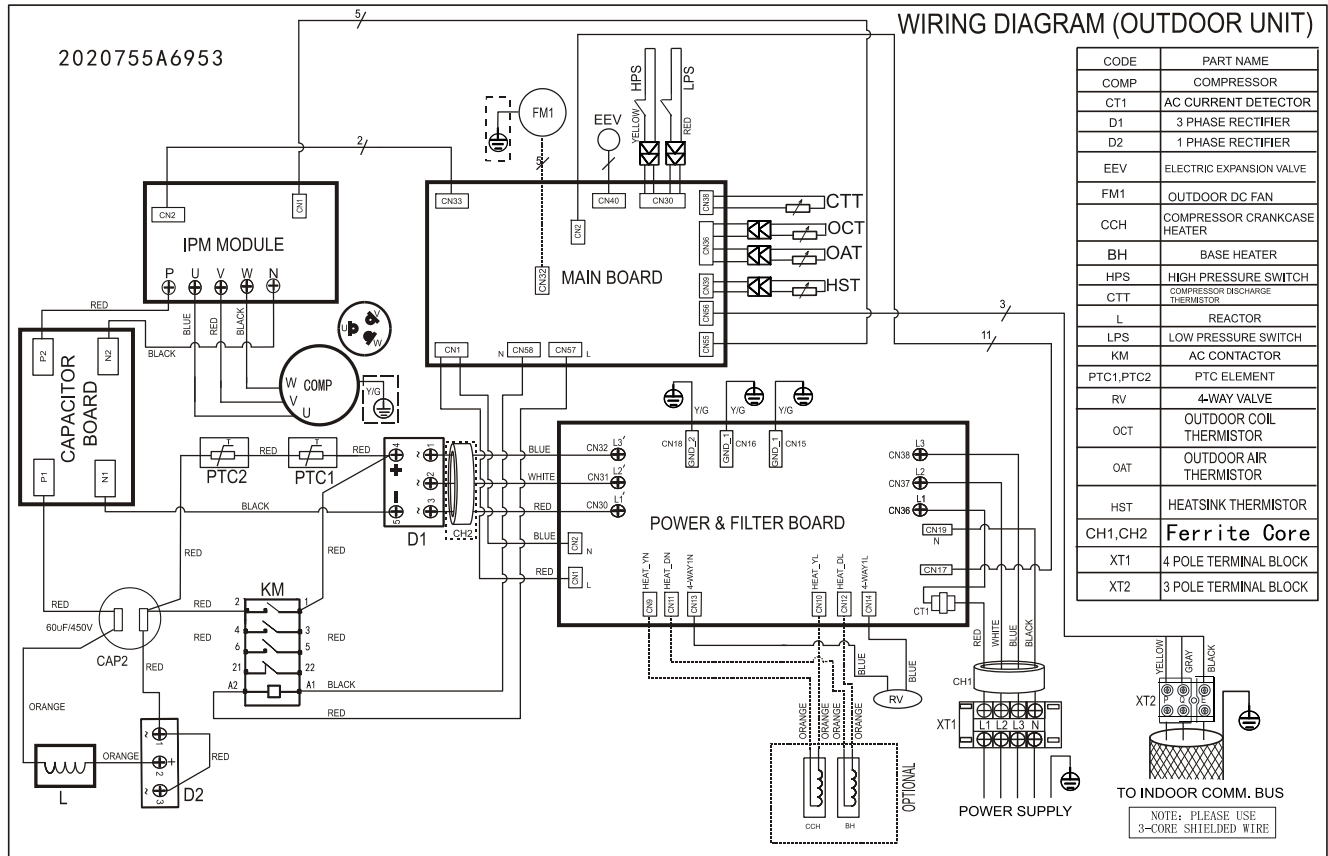


AWAU-YLD036-H11

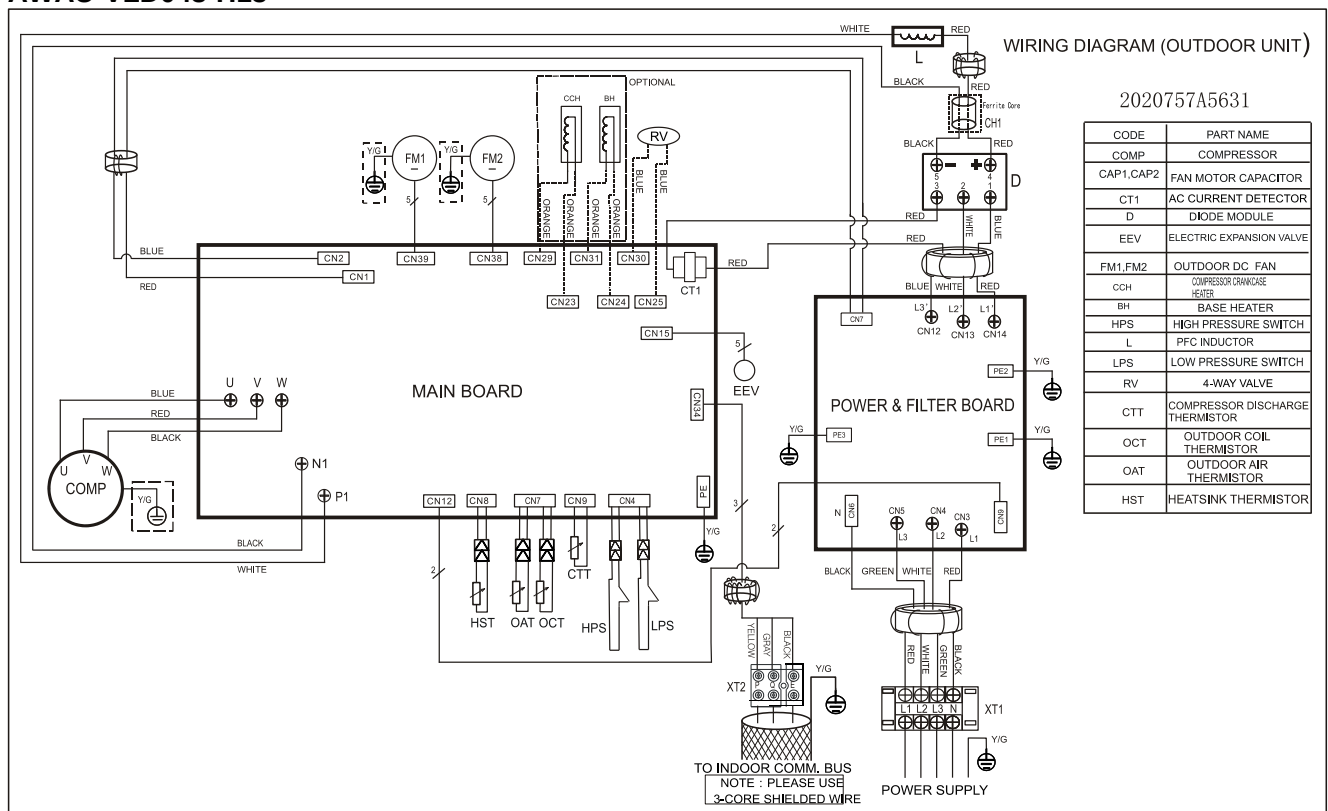
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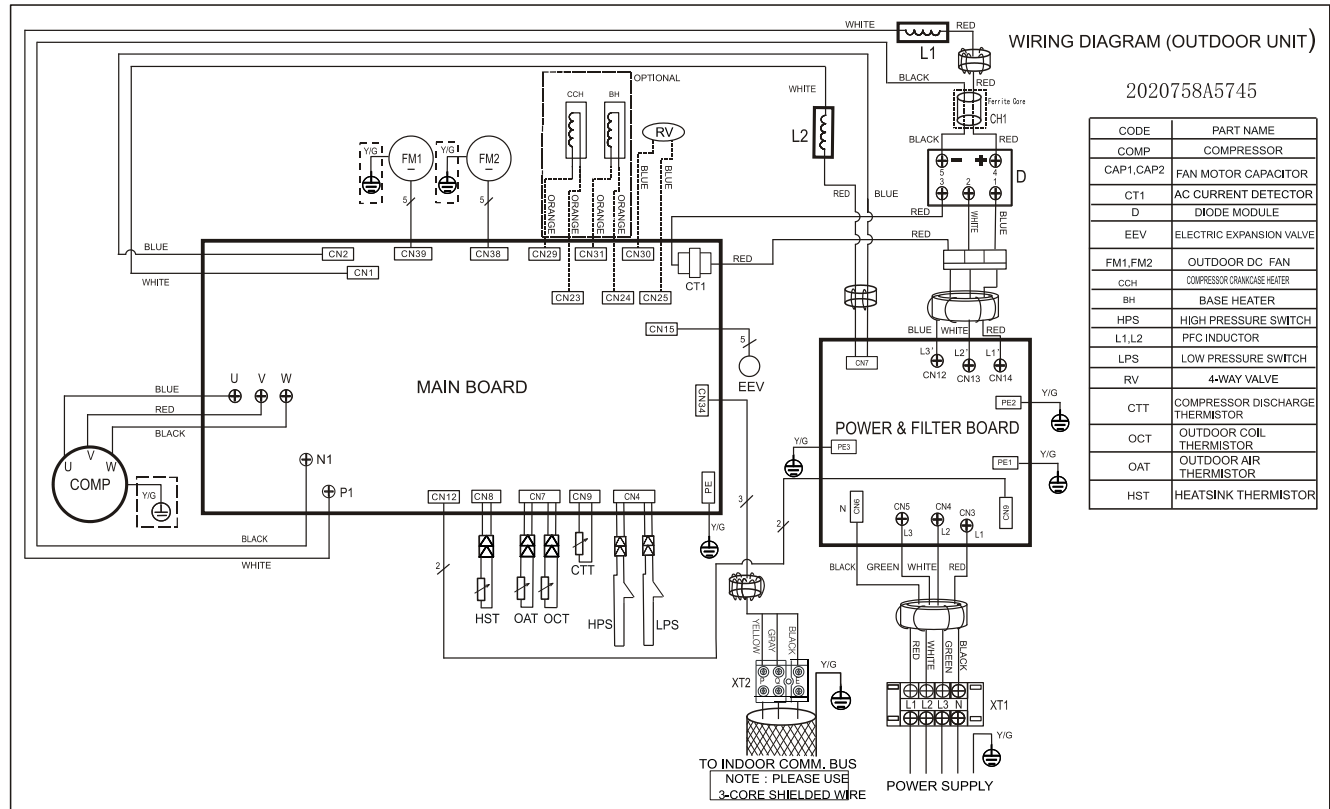
AWAU-VLD036-H13



AWAU-VLD048-H13



AWAU-VLD060-H13



5. Electric Characteristics

Model	Outdoor Unit				Power Supply
	Hz	Voltage	Min.	Max.	MFA
AWAU-VLD012-H11	50	220-240V	198V	254V	16
AWAU-VLD018-H11	50	220-240V	198V	254V	20
AWAU-VLD024-H11	50	220-240V	198V	254V	30
AWAU-VLD030-H11	50	220-240V	198V	254V	30
AWAU-VLD036-H11	50	220-240V	198V	254V	30
AWAU-VLD036-H13	50	380-415V	342V	440V	20
AWAU-VLD048-H13	50	380-415V	342V	440V	25
AWAU-VLD060-H13	50	380-415V	342V	440V	25

Note:

MFA: Max. Fuse Amps. (A)

6. Operation Limits

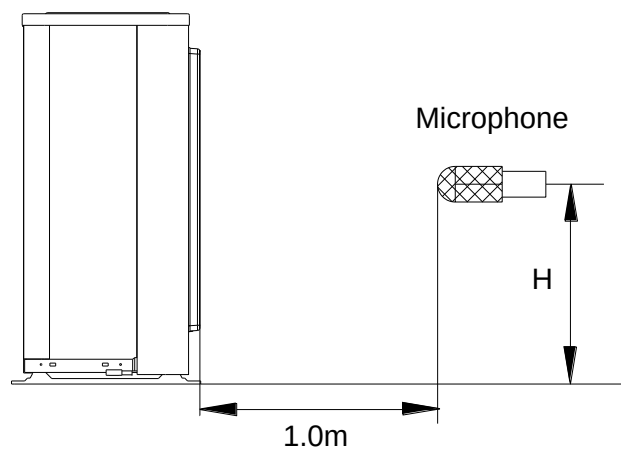
Temperature Mode	Cooling operation	Heating operation
Room temperature	$\geq 17^{\circ}\text{C}$	$\leq 30^{\circ}\text{C}$
Outdoor temperature	$0^{\circ}\text{C} \sim 50^{\circ}\text{C}$	$-15^{\circ}\text{C} \sim 24^{\circ}\text{C}$
	$-15^{\circ}\text{C} \sim 50^{\circ}\text{C}$ (For the models with low temperature cooling system)	

CAUTION:

1. If the air conditioner is used beyond the above conditions, certain safety protection features may come into operation and cause the unit to operate abnormally.
2. The room relative humidity should be less than 80%. If the air conditioner operates beyond this figure, the surface of the air conditioner may attract condensation. Please set the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.
3. The optimum performance will be achieved during this operating temperature zone.

7. Sound Levels

Outdoor Unit

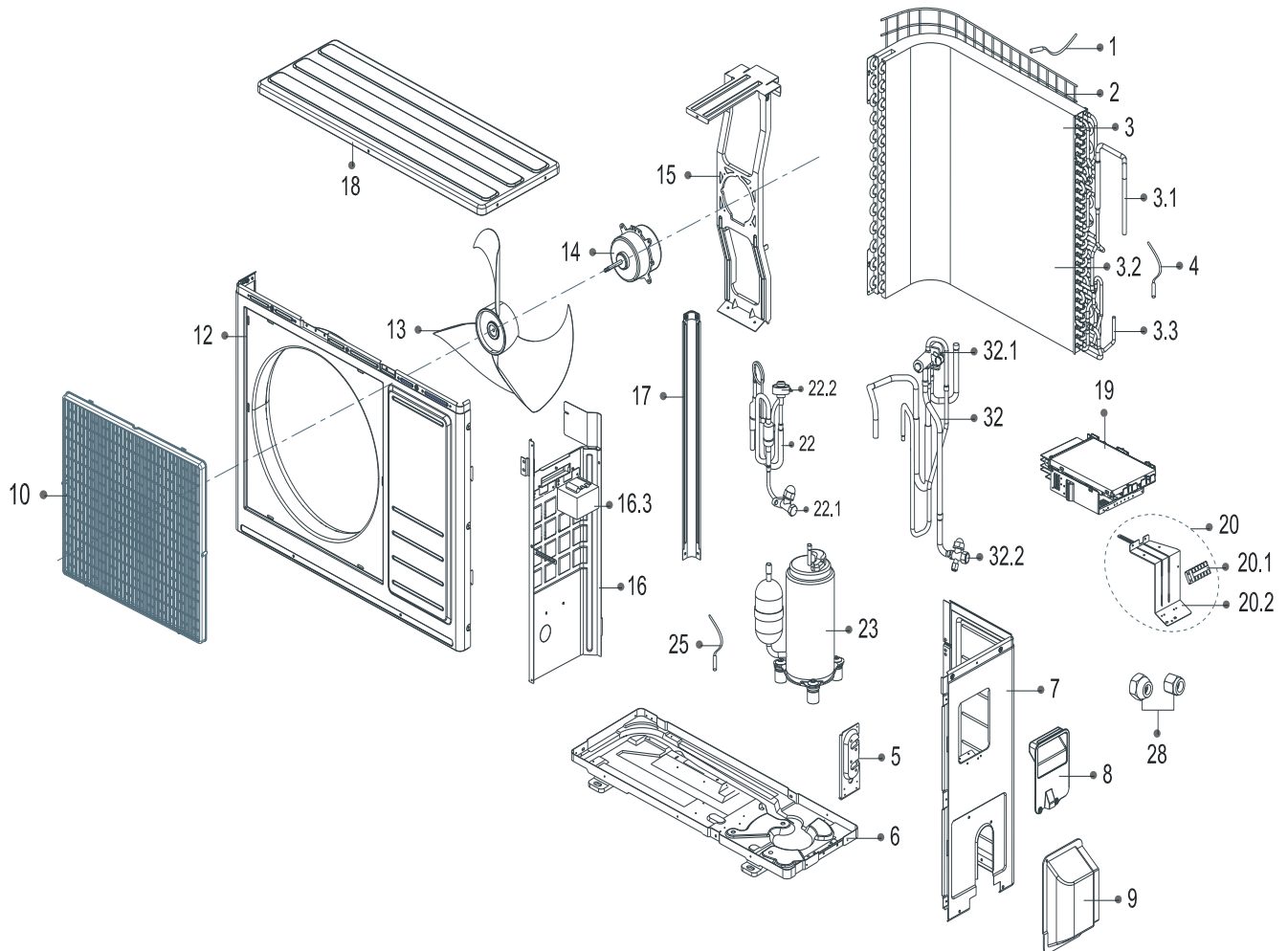


Note: $H = 0.5 \times \text{height of outdoor unit}$

Model	Noise Power dB(A)	Noise level dB(A)
AWAU-VLD012-H11	62	58
AWAU-VLD018-H11	66	60
AWAU-VLD024-H11	69	60
AWAU-VLD030-H11	70	61
AWAU-VLD036-H11	69	64
AWAU-VLD036-H13	70	63
AWAU-VLD048-H13	70	63
AWAU-VLD060-H13	70	64

8. Exploded View and Spare Part list

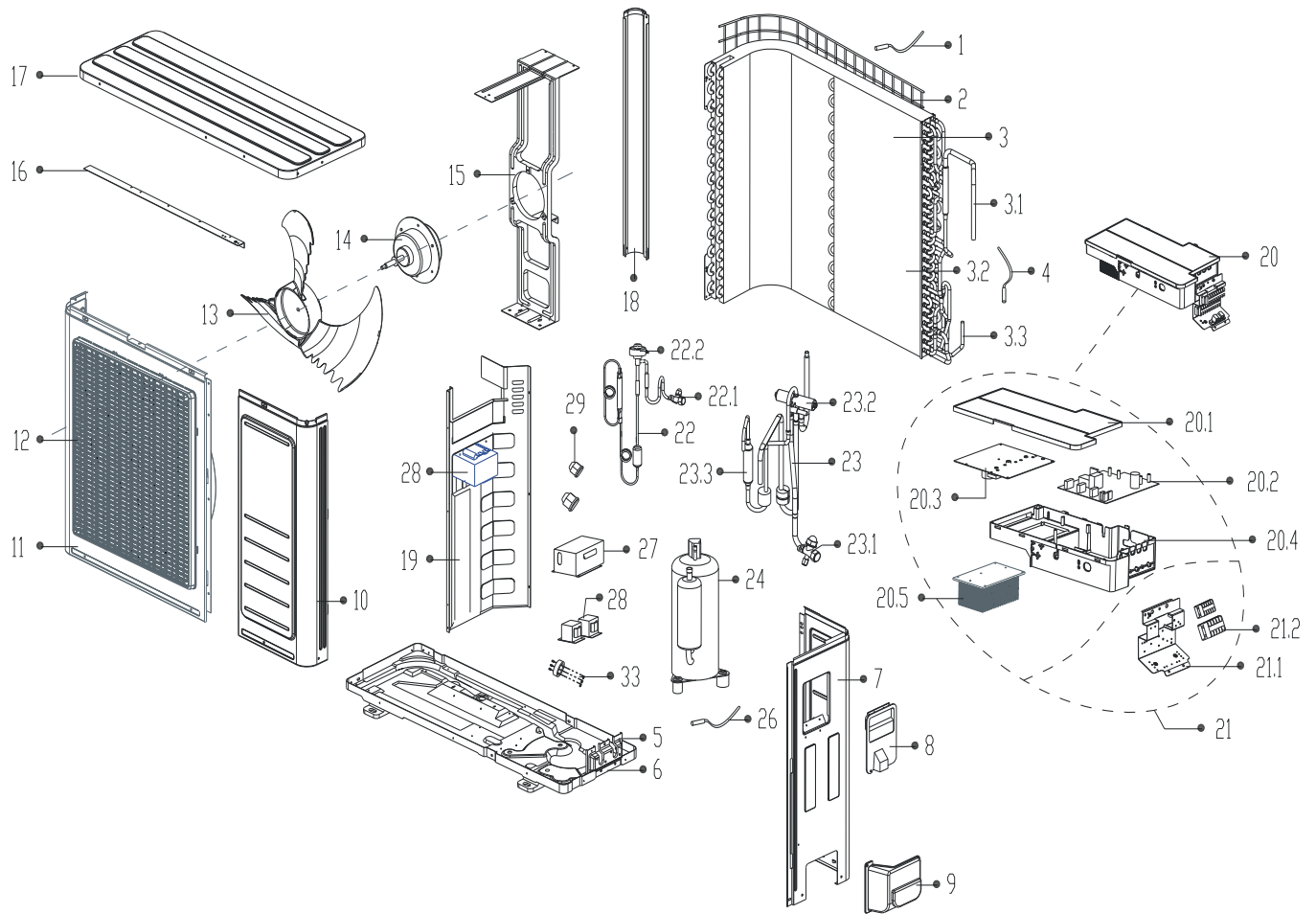
Exploded View of outdoor unit:AWAU-VLD012-H11



Spare part list of outdoor unit:AWAU-VLD012-H11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Ambient temperature sensor assembly	1	202301310063	16	Partition board assembly	1	201237500241
2	Rear net	1	2011374G0003	16.3	Reactor	1	202301000867
3	Condenser assembly	1	201537390033	17	Left supporter	1	201237400400
3.1	Input pipe assembly	1	201637490766	18	Top cover assembly	1	201237900028
3.2	Condenser assembly	1	201537390034	19	Electronic control box assembly	1	203337590112
3.3	Fluted pipe assembly	1	201637490176	20	Terminal board assembly	1	203337790146
4	Pipe temperature sensor assembly	1	202440500004	20.1	Wire joint	1	202301400223
5	Valve plate	1	201237200299	20.2	Terminal board	1	201237590046
6	Chassis assembly	1	201237590105	22	Liquid valve assembly	1	201637391551
7	Rear right clapboard assembly	1	201237500263	22.1	Liquid valve	1	201600740523
8	Big handle	1	201137900007	22.2	Electronic expansion valve assembly	1	201601300554
9	Water collector	1	201137400000	23	Compressor	1	201400620600
10	Air outlet grille	1	2011374A0004	25	Discharge temperature sensor	1	202301310068
	Round sticker of air outlet grille	1	2011374A0005	28	Copper nut	1	201600320001
12	Front panel	1	2012374A0056	28	Copper nut	1	201600320000
13	Axial flow fan	1	201100390002	32	4-Ways valve assembly	1	2016373A0211
14	Asynchronous motor	1	202400300060	32.1	4-Ways valve	1	201600600521
15	Supporter assembly of fan motor	1	201237390026	32.2	Gas valve	1	201600720095

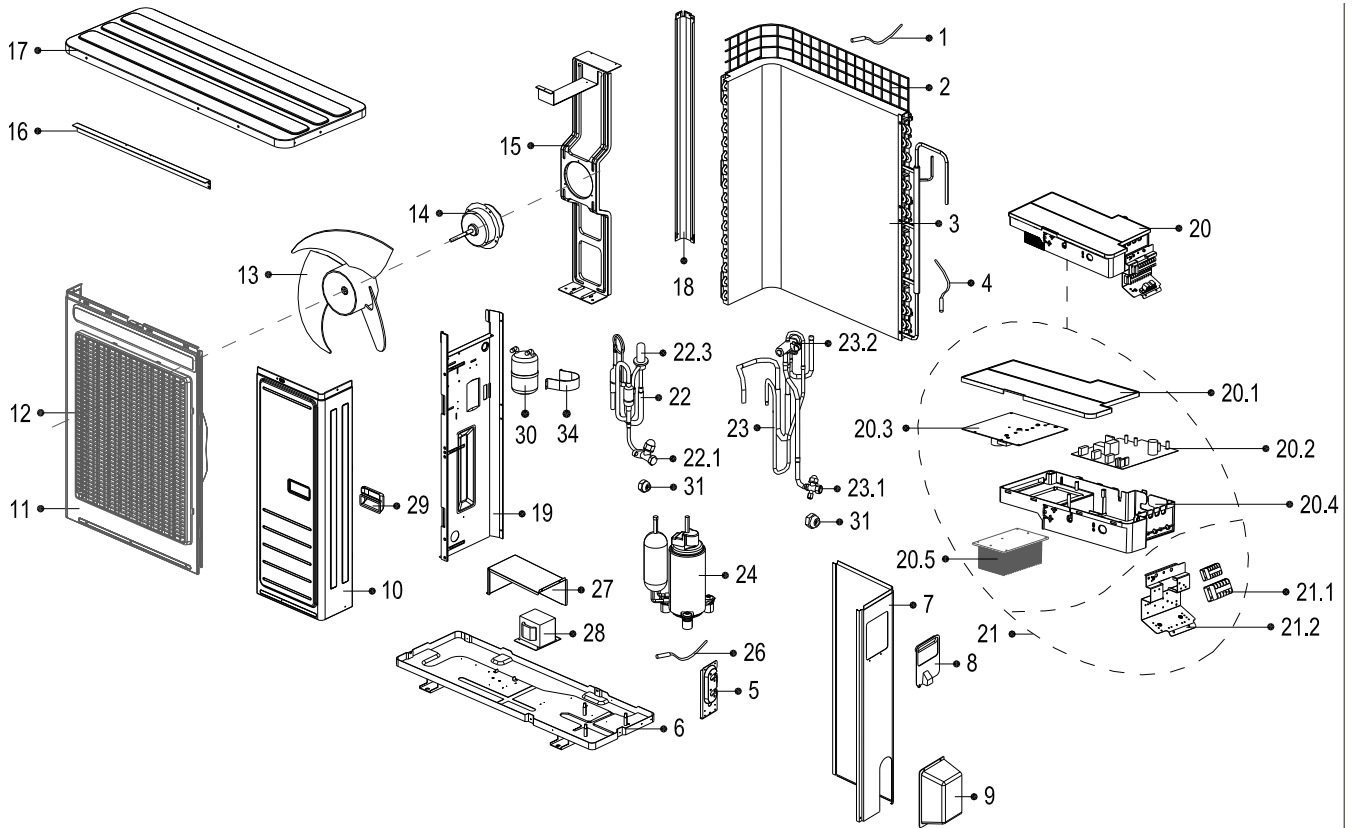
Exploded View of outdoor unit:AWAU-VLD018-H11



Spare part list of outdoor unit:AWAU-VLD018-H11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Ambient temperature sensor assembly	1	202301310075	20.1	Cover of electronic control box	1	201157190011
2	Rear net	1	2011481G0001	20.2	Main control board assembly	1	2013752A0014
3	Condenser assembly	1	201537990084	20.3	Inverter control board assembly	1	201375290027
3.1	Input pipe assembly	1	201637991011	20.4	Installation board for E-parts	1	201157190010
3.2	Condenser assembly	1	201537990003	20.5	Radiator	1	202301901173
3.3	Fluted pipe assembly	1	201637991010	21	Terminal board assembly	1	203375290076
4	Pipe temperature sensor assembly	1	202440500004	21.1	Installation plate of electric parts	1	201257190117
5	Valve plate	1	201237300316	21.2	Wire joint	1	202301450042
6	Chassis assembly	1	201257090054	21.2	Wire joint	1	202301450121
7	Rear right clapboard assembly	1	201237890121	22	Liquid valve assembly	1	201675290610
8	Big handle	1	201137900007	22.1	Liquid valve	1	201600700078
9	Water collector	1	201137390017	22.2	Electronic expansion valve assembly	1	201601300554
10	Front right clapboard assembly	1	201248100389	23	4-way valve assembly	1	2016752A0124
11	Front panel	1	201248100390	23.1	Gas valve	1	201600720194
12	Air outlet grille	1	2011379A0005	23.2	4-Ways valve	1	201600690011
	Round sticker of air outlet grille	1	2011374A0005	23.3	Accumulator tank	1	201601010017
13	Axial flow fan	1	201100300553	24	Compressor	1	201400603269
14	Asynchronous motor	1	202400300535	26	Discharge temperature sensor assembly	1	202448200000
15	Supporter assembly of fan motor	1	201257090067	27	Cover of inductance	1	201248090001
16	Rear supporter	1	201248100384	28	Reactor	1	202301000903
17	Top cover assembly	1	201257190097	29	Copper nut	1	201600320002
18	Left supporter	1	201248100367	29	Copper nut	1	201600320000
19	Partition board assembly	1	201257190118	33	Compressor wire assembly	1	202402220154
20	Electronic control box assembly	1	2033752A0057				

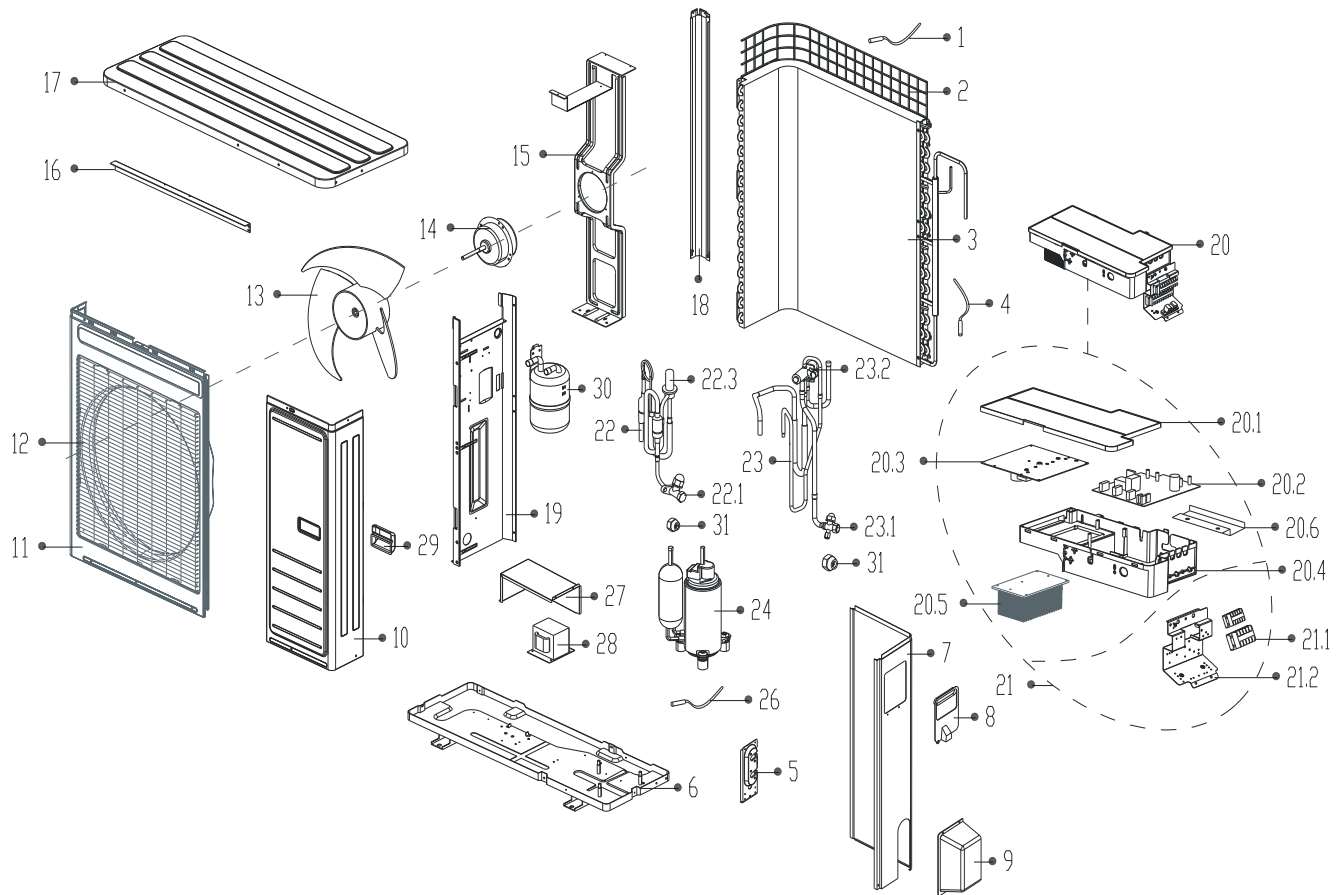
Exploded View of outdoor unit:AWAU-VLD024-H11



Spare part list of outdoor unit:AWAU-VLD024-H11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Ambient temperature sensor assembly	1	202301310075	20.3	Inverter control board assembly	1	201357190085
2	Rear net	1	2011482G0001	20.4	Electronic installing plate	1	201157190010
3	Condenser assembly	1	201557190037	20.5	Radiator	1	202301901173
4	Pipe temperature sensor assembly	1	202301300111	21	Terminal board assembly	1	203375390330
5	Valve plate	1	201248300316	21.1	Wire joint	1	202301450042
6	Chassis assembly	1	201257190085	21.1	Wire joint	1	202301450121
7	Rear right clapboard assembly	1	201238190023	21.2	Terminal board	1	201257190120
8	Big handle	1	201157390007	22	Liquid valve assembly	1	201675390818
9	Water collector	1	201138090002	22.1	Liquid valve	1	201600740706
10	Front right clapboard assembly	1	201248200082	22.3	Electronic expansion valve	1	201601300032
11	Front panel	1	201248200103	23	4-ways valve assembly	1	2016753A0161
12	Air outlet grille	1	2011482A0001	23.1	Gas valve	1	201600720398
	Round sticker of air outlet grille	1	2011374A0005	23.2	4-ways valve	1	201600600119
13	Axial flow fan	1	201100300527	24	Compressor	1	201400601740
14	Brushless DC Motor	1	202400300047	26	Discharge temperature sensor assembly	1	202448200000
15	Supporter assembly of fan motor	1	201257190071	27	Cover of inductance	1	201248390003
16	Rear supporter	1	201248200095	28	Reactor	1	202301000943
17	Top cover assembly	1	201248300309	29	Handle	2	201148700009
18	Left supporter	1	201248400036	30	Accumulator cylinder	1	201601000603
19	Partition board assembly	1	201257190115	31	Copper nut	1	201600320003
20	Electronic control box assembly	1	203375390332	31	Copper nut	1	201600320001
20.1	Cover of electronic control box	1	201157190011	34	Fix clamp of segregator	1	201245000901
20.2	Outdoor main control board assembly	1	201375390026				

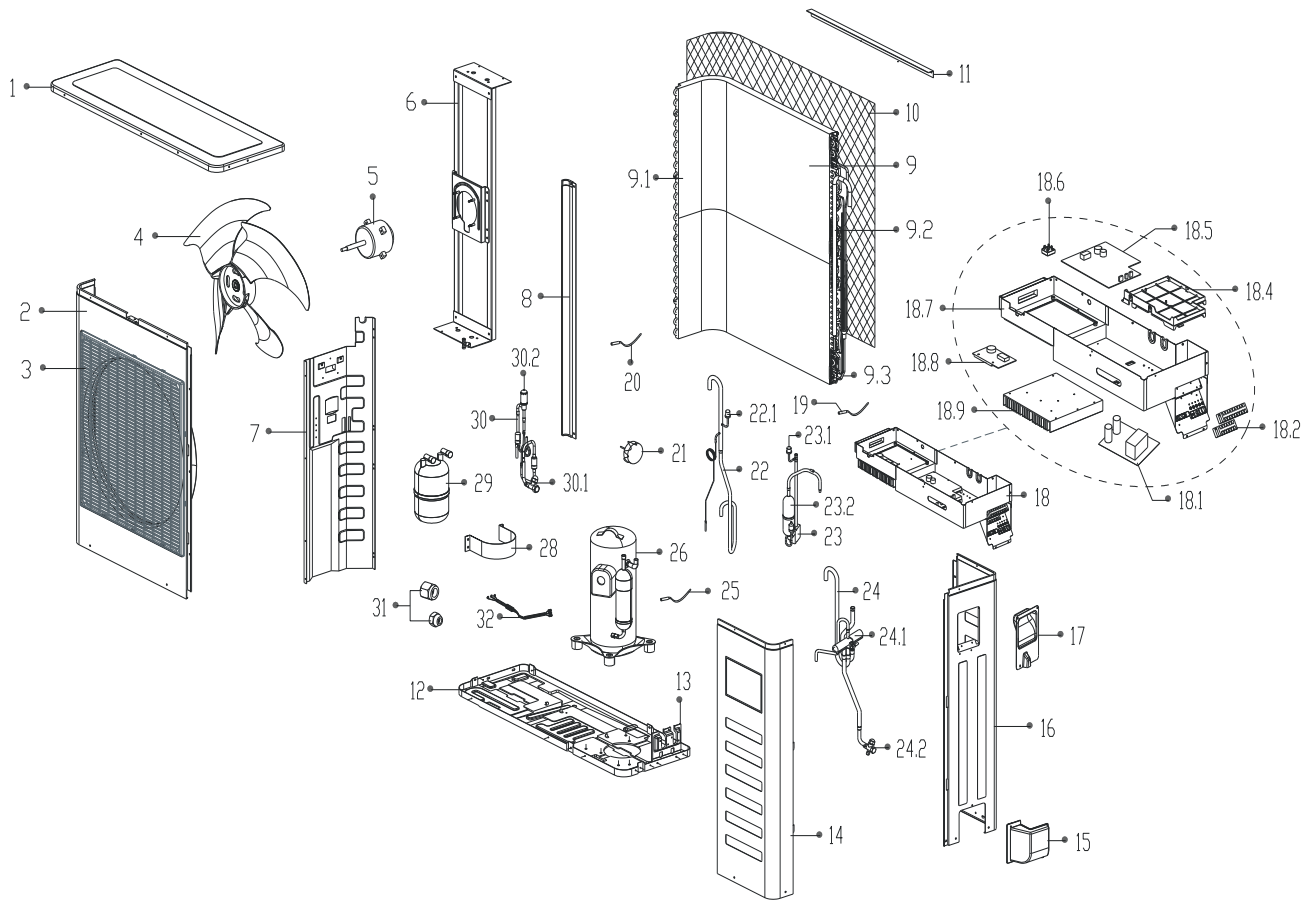
Exploded View of outdoor unit:AWAU-VLD030-H11



Spare part list of outdoor unit:AWAU-VLD030-H11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Ambient temperature sensor assembly	1	202301310075	20.3	Inverter control board assembly	1	201357190085
2	Rear net	1	2011482G0001	20.4	Installation board for E-parts	1	201157190010
3	Condenser assembly	1	201557190037	20.5	Radiator	1	202301901173
4	Pipe temperature sensor assembly	1	202301300111	20.6	Installation plate of PCB	1	201295200010
5	Valve plate	1	201248300316	21	Terminal board assembly	1	203375390330
6	Chassis assembly	1	201257190085	21.1	Wire joint	1	202301450042
7	Rear right clapboard assembly	1	201238190023	21.1	Wire joint	1	202301450121
8	Big handle	1	201157390007	21.2	Terminal board	1	201257190120
9	Water collector	1	201138090002	22	Liquid valve assembly	1	201675390818
10	Front right clapboard assembly	1	201248200082	22.1	Liquid valve	1	201600740706
11	Front panel	1	201248200103	22.3	Electronic expansion valve	1	201601300032
12	Air outlet grille	1	2011482A0001	23	4-way valve assembly	1	2016753A0161
	Round sticker of air outlet grille	1	2011374A0005	23.1	Gas valve	1	201600720398
13	Axial flow fan	1	201100300527	23.2	4-Ways valve	1	201600600119
14	Asynchronous motor	1	202400300047	24	Compressor	1	201400601740
15	Supporter assembly of fan motor	1	201257190071	26	Discharge temperature sensor assembly	1	202448200000
16	Rear supporter	1	201248200095	27	Cover of inductance	1	201248390003
17	Top cover assembly	1	201248300309	28	Reactor	1	202301000943
18	Left supporter	1	201248400036	29	Small Handle	2	201148700009
19	Partition board assembly	1	201257190115	30	Accumulator cylinder	1	201601000603
20	Electronic control box assembly	1	203375490059	31	Copper nut	1	201600320003
20.1	Cover of electronic control box	1	201157190011	31	Copper nut	1	201600320001
20.2	Main control board assembly	1	201375490032				

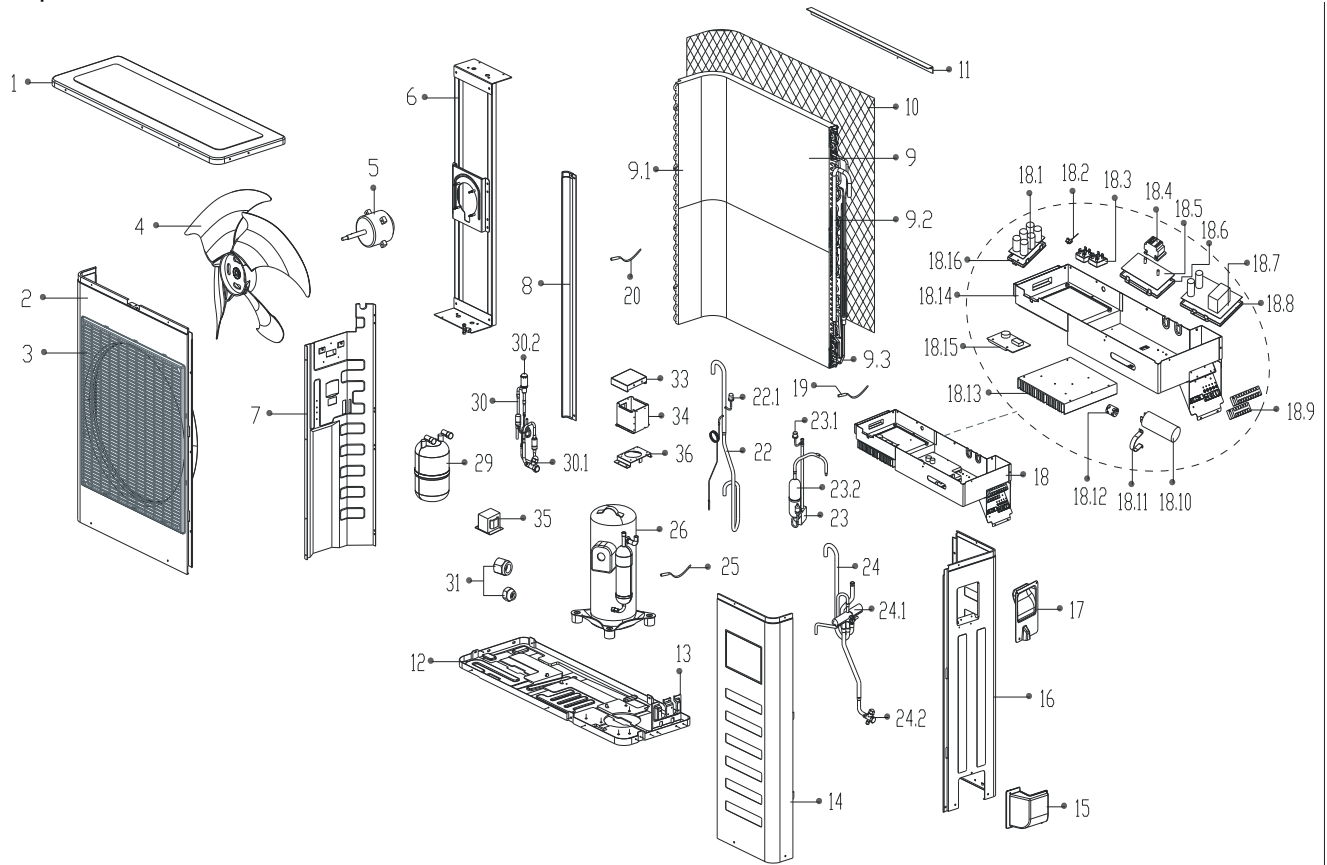
Exploded View of outdoor unit:AWAU-VLD036-H11



Spare part list of outdoor unit:AWAU-VLD036-H11

No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Top cover assembly	1	201275590191	18.5	Main control board assembly	1	201375590213
2	Front panel	1	201248700072	18.6	Rectifier bridge	1	202300500328
3	Air outlet grille	1	2011487A0003	18.7	E-part Subassembly box	1	201275590179
	Round sticker of air outlet grille	1	2011374A0005	18.8	Inverter control board assembly	1	201357190031
4	Axial flow fan	1	201100320624	18.9	Radiator	1	202301901085
5	Asynchronous motor	1	202400300051	19	Pipe temperature sensor assembly	1	202301300111
6	Supporter assembly of fan motor	1	201275590219	20	Ambient temperature sensor assembly	1	202301310075
7	Partition board assembly	1	201257290010	21	Electrical inductance	1	202301000523
8	Left supporter	1	201248700262	22	Suction pipe assembly	1	201675490388
9	Condenser assembly	1	201557190043	22.1	Pressure switch	1	202301820021
9.1	Condenser assembly	1	201557190044	23	Discharge pipe assembly	1	2016755A2265
9.1	Condenser assembly	1	201557190045	23.1	Pressure switch	1	202301820020
9.2	Input pipe assembly	1	201657290044	23.2	Oil separator	1	201601100168
9.3	Fluted pipe assembly	1	201657290037	24	4-way valve assembly	1	201675591195
10	Rear net	1	2011487G0001	24.1	4-Ways valve	1	201600600124
11	Rear net frame	1	2012487G0011	24.2	Gas valve	1	201600770802
12	Chassis assembly	1	201275590093	25	Discharge temperature sensor	1	202448200000
13	Valve plate	1	201248790014	26	Compressor	1	201401500220
14	Front right clapboard assembly	1	201248700056	28	Fix clamp of segregator	1	201245000901
15	Water collector	1	201148790000	29	Accumulator cylinder	1	201601000074
16	Rear right clapboard assembly	1	201248700266	30	liquid valve assembly	1	201675591192
17	Big handle	1	201157390007	30.1	Liquid valve	1	201600740704
18	Electronic control box assembly	1	203375590343	30.2	Electronic expansion valve	1	201601300033
18.1	Outdoor Power Supply Subassembly	1	201319901145	31	Copper nut	1	201600320003
18.2	Wire joint	1	202301450121	31	Copper nut	1	201600320001
18.2	Wire joint	1	202301450116	32	Compressor wire assembly	1	202402220152
18.4	Installing Plate	1	201157390005				

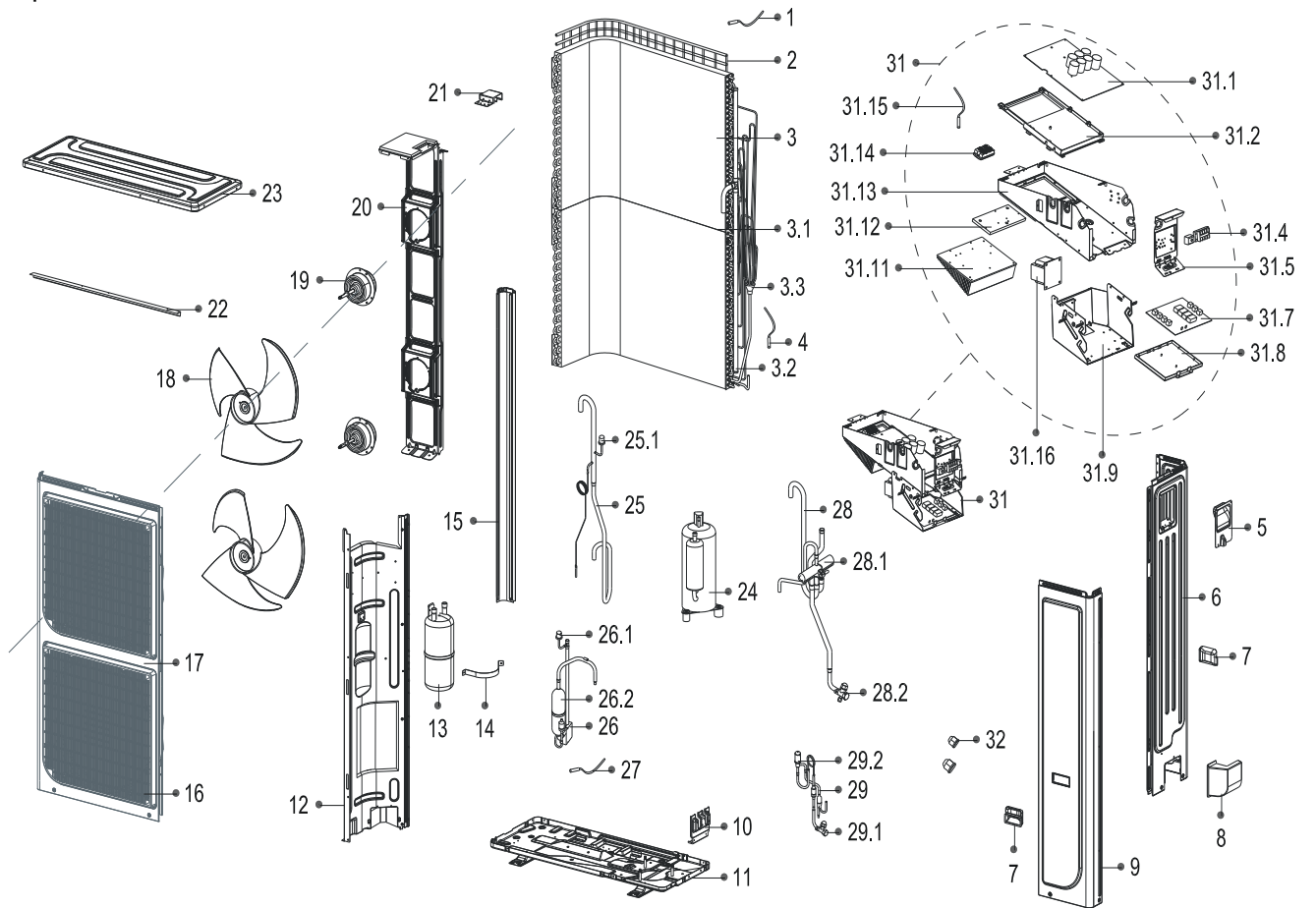
Exploded View of outdoor unit:AWAU-VLD036-H13



Spare part list of outdoor unit:AWAU-VLD036-H13

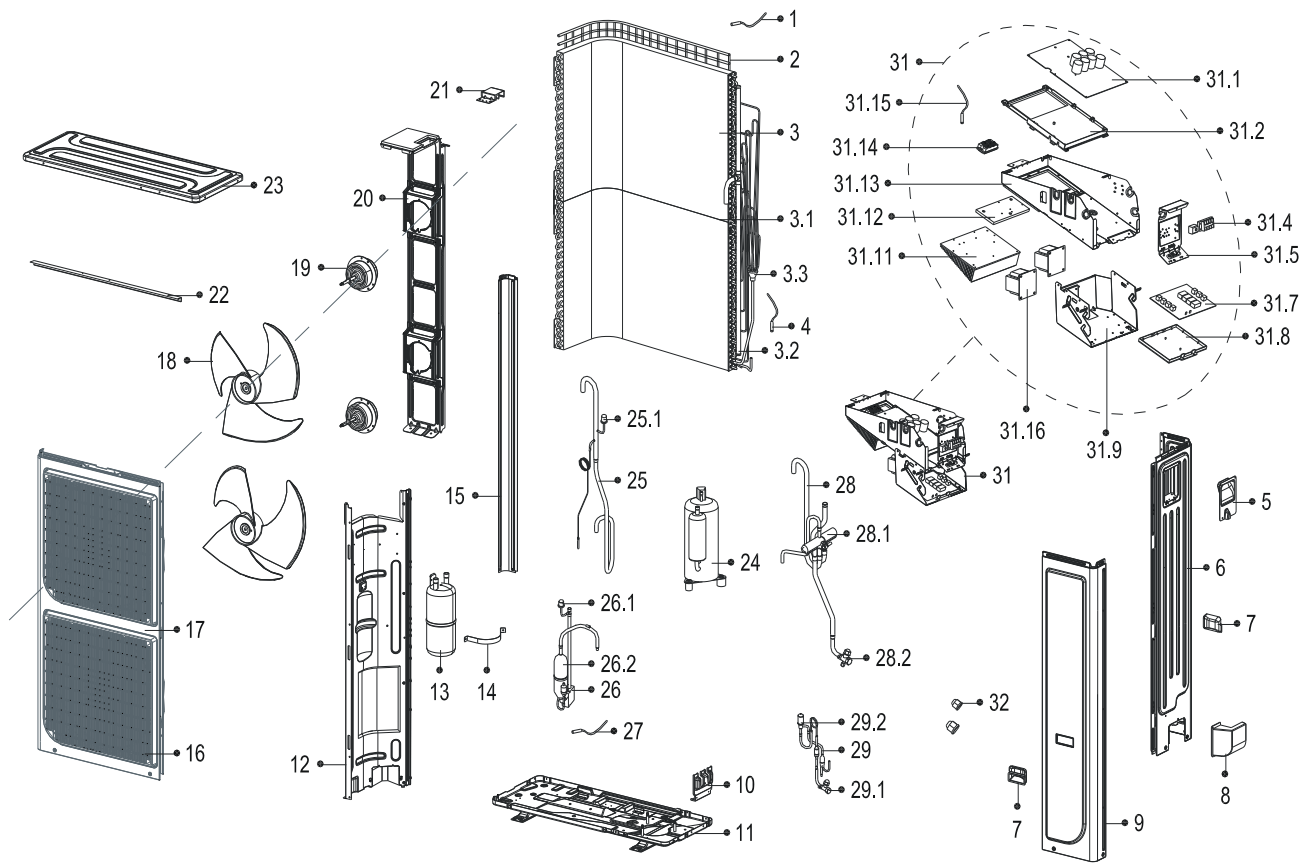
No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Top cover assembly	1	201275590191	18.9	Wire joint	1	202301450139
2	Front panel	1	201248700072	18.9	Wire joint	1	202301450121
3	Air outlet grille	1	2011487A0003	18.10	Capacitor	1	202401000073
	Round sticker of air outlet grille	1	2011374A0005	18.11	Capacitor Clamp	1	201200100011
4	Axial flow fan	1	201100320624	18.12	Magnetic Loop	2	202301000016
5	Asynchronous motor	1	202400300051	18.13	Radiator	1	202301901144
6	Supporter assembly of fan motor	1	201275590219	18.14	E-part box Subassembly	1	201247790001
7	Partition board assembly	1	201275590234	18.15	Inverter control board assembly	1	201375590172
8	Left supporter	1	201248700262	18.16	Installation Board	1	201175890006
9	Condenser assembly	1	201557190043	19	Pipe temperature sensor assembly	1	202450200331
9.1	Condenser assembly	1	201557190044	20	Ambient temperature sensor assembly	1	202301300197
9.1	Condenser assembly	1	201557190045	22	Suction pipe assembly	1	201675591155
9.2	Input pipe assembly	1	201657290044	22.1	Pressure switch	1	202301820021
9.3	Fluted pipe assembly	1	201657290037	23	Discharge pipe assembly	1	201675591154
10	Rear net	1	2011487G0001	23.1	Pressure switch	1	202301820020
11	Rear net frame	1	2012487G0011	23.2	Oil separator	1	201601100168
12	Chassis assembly	1	201275490004	24	4-way valve assembly	1	2016755A2264
13	Valve plate	1	201248790014	24.1	4-Ways valve	1	201600600124
14	Front right clapboard assembly	1	201248700056	24.2	Gas valve	1	201600770802
15	Water collector	1	201148790000	25	Discharge temperature sensor	1	202301300124
16	Rear right clapboard assembly	1	201248700266	26	Compressor	1	201401500230
17	Big handle	1	201157390007	29	Accumulator cylinder	1	201601100060
18	Electronic control box assembly	1	203375590342	30	liquid valve assembly	1	201675591192
18.1	Outdoor Power Supply Plate Subassembly	1	201375890118	30.1	Liquid valve	1	201600740704
18.2	Discharge temperature sensor assembly	1	202301310068	30.2	Electronic expansion valve	1	201601300033
18.3	Rectifier bridge	1	202300500326	31	Copper nut	1	201600320003
18.3	Rectifier bridge	1	202300500956	31	Copper nut	1	201600320001
18.4	Contacto	1	202300850043	33	Electric inductance cover	1	201238090037
18.5	Main control board assembly	1	201375590211	34	Protecting board of inductance	1	201238090038
18.6	Installing Plate	1	201175890008	35	Reactor	1	202301000256
18.7	Outdoor Power Supply Plate Subassembly	1	201375590192	36	Inductance Holder	1	201250200305
18.8	Electric Installing Box	1	201175590323				

Exploded View of outdoor unit:AWAU-VLD048-H13



No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Ambient temperature sensor assembly	1	202301390003	25	Suction pipe assembly	1	201675890878
2	Rear net	1	201175690001	25.1	Pressure switch	1	202301820021
3	Condenser assembly	1	201575790146	26	Discharge pipe assembly	1	201675890880
3.1	Condenser assembly	1	201575790144	26.1	Pressure switch	1	202301820038
3.1	Condenser assembly	1	201575790145	26.2	Oil separator	1	201601100168
3.2	Input pipe assembly	1	201675790936	27	Discharge temperature sensor assembly	1	202301300124
3.3	Fluted pipe assembly	1	201675591150	28	4-way valve assembly	1	2016757A0167
4	Pipe temperature sensor assembly	1	202450200331	28.1	4-way valve	1	201600600124
5	Big Handle assembly	1	201248100325	28.2	Gas valve	1	201600770802
6	Rear right clapboard assembly	1	201248700199	29	Liquid valve assembly	1	201675790952
7	Handle	2	201148700009	29.1	Liquid valve	1	201600740704
8	Water collector	1	201148790000	29.2	Electronic expansion valve	1	201601300022
9	Front clapboard assembly	1	201248700204	31	Electronic control box assembly	1	203375790126
10	Valve plate	1	201248790014	31.1	Main control board assembly	1	201375790069
11	Chassis	1	201248700290	31.2	Installation plate for main board	1	201175890009
12	Partition board assembly	1	201248700235	31.4	Wire joint	1	202301450121
13	Accumulator cylinder	1	201601000636	31.4	Wire joint	1	202301450139
14	Fix clamp of segregator	1	201248700067	31.5	Terminal Installing Plate	1	201248700233
15	Left clapboard	1	201275690067	31.7	Outdoor power board assembly	1	201375890169
16	Air outlet grille	2	2011487A0002	31.8	Installing Plate	1	201175590323
	Round sticker of air outlet grille	2	2011374A0005	31.9	Connecting board of electronic control box	1	201275890158
17	Front panel	1	201248700201	31.11	Radiator	1	202301900140
18	Axial flow fan	2	201100300045	31.12	Radiator	1	202301900139
19	Fan motor	2	202400370026	31.13	Electric Component Mounted Board Subassembly	1	201248700234
20	Supporter assembly of fan motor	1	201248700245	31.14	Three phase bridge	1	202300500326
21	Support Board	1	201248300231	31.15	Discharge temp sensor assembly	1	202301310068
22	Supporting bar	1	201275690066	31.16	Reactor	1	202301000956
23	Top cover assembly	1	201248300242	32	Copper nut	1	201600320001
24	Compressor	1	201401500300	32	Copper nut	1	201600320003

Exploded View of outdoor unit:AWAU-VLD060-H13



Spare part list of outdoor unit:AWAU-VLD060-H13

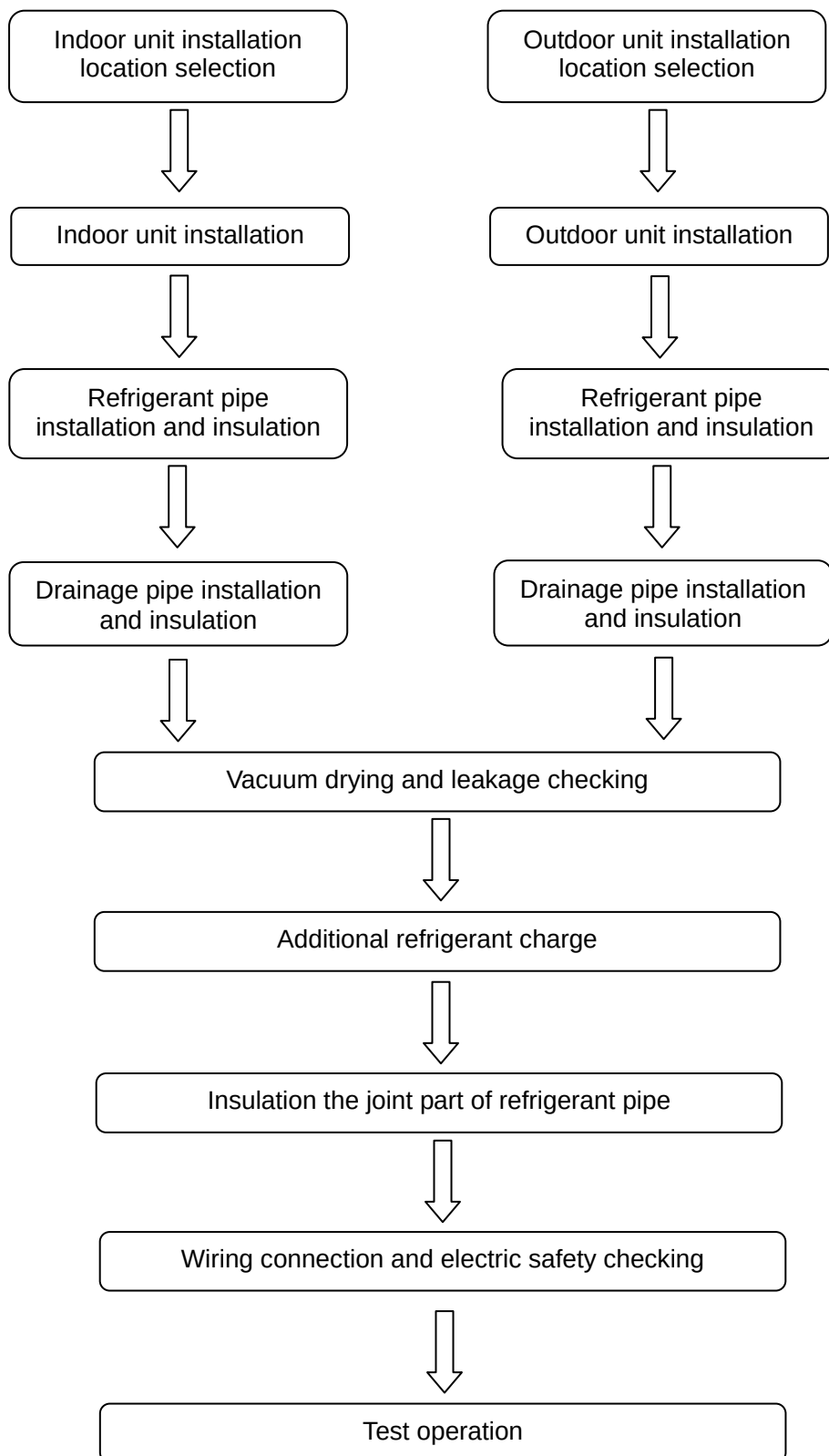
No.	Part Name	Qty	BOM Code	No.	Part Name	Qty	BOM Code
1	Ambient temperature sensor assembly	1	202301390003	25.1	Pressure switch	1	202301820021
2	Rear net	1	201175690001	26	Discharge pipe assembly	1	201675890880
3	Condenser assembly	1	2015758A0112	26.1	Pressure switch	1	202301820038
3.1	Condenser assembly	1	201575890174	26.2	Oil separator	1	201601100168
3.1	Condenser assembly	1	201575890173	27	Discharge temperature sensor assembly	1	202301300124
3.2	Input pipe assembly	1	201675890900	28	4-way valve assembly	1	201675790986
3.3	Fluted pipe assembly	1	201675890890	28.1	4-way valve	1	201600600166
4	Pipe temperature sensor assembly	1	202450200331	28.2	Gas valve	1	201600720684
5	Big Handle assembly	1	201248100325	29	Liquid valve assembly	1	201675790952
6	Rear right clapboard assembly	1	201248700199	29.1	Liquid valve	1	201600740704
7	Handle	2	201148700009	29.2	Electronic expansion valve	1	201601300022
8	Water collector	1	201148790000	31	Electronic control box assembly	1	203375890209
9	Front clapboard assembly	1	201248700204	31.1	Main control board assembly	1	201375890175
10	Valve plate	1	201248790014	31.2	Installation plate for main board	1	201175890009
11	Chassis	1	201248700290	31.4	Wire joint	1	202301450121
12	Partition board assembly	1	201248700235	31.4	Wire joint	1	202301450139
13	Accumulator cylinder	1	201601000636	31.5	Terminal Installing Plate	1	201248700233
14	Fix clamp of segregator	1	201248700067	31.7	Outdoor power board assembly	1	201375890169
15	Left clapboard	1	201275690067	31.8	Installing Plate	1	201175590323
16	Air outlet grille	2	2011487A0002	31.9	Connecting board of electronic control box	1	201275890158
	Round sticker of air outlet grille	2	2011374A0005	31.11	Radiator	1	202301900140
17	Front panel	1	201248700201	31.12	Radiator	1	202301900139
18	Axial flow fan	2	201100300045	31.13	Electric Component Mounted Board Subassembly	1	201248700234
19	Fan motor	2	202400370026	31.14	Three phase bridge	1	202300500326
20	Supporter assembly of fan motor	1	201248700245	31.15	Discharge temp sensor assembly	1	202301310068
21	Support Board	1	201248300231	31.16	Reactor	1	202301000950
22	Supporting bar	1	201275690066	31.16	Reactor	1	202301000956
23	Top cover assembly	1	201248300242	32	Copper nut	1	201600320004
24	Compressor	1	201401500300	32	Copper nut	1	201600320001
25	Suction pipe assembly	1	201675890878				

Part 4

Installation

1. Installation Procedure	160
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10. Engineering of electrical wiring	190
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1. Installation Procedure



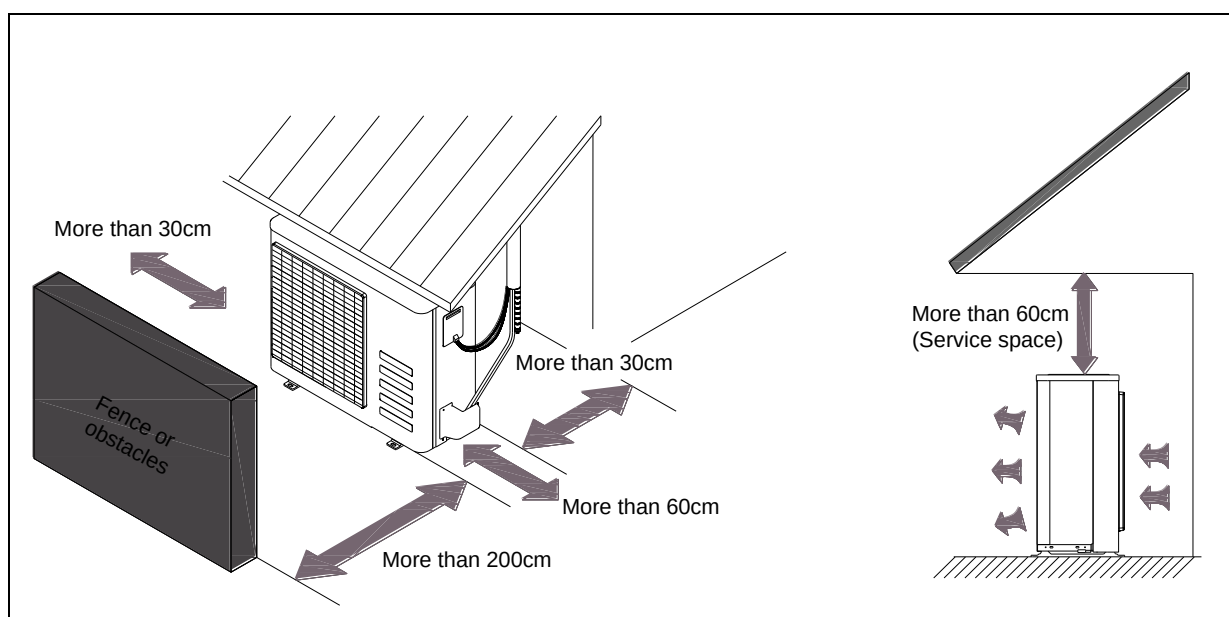
2. Location selection

2.1 Indoor unit location selection

- The place shall easily support the indoor unit's weight.
- The place can ensure the indoor unit installation and inspection.
- The place can ensure the indoor unit horizontally installed.
- The place shall allow easy water drainage.
- The place shall easily connect with the outdoor unit.
- The place where air circulation in the room should be good.
- There should not be any heat source or steam near the unit.
- There should not be any oil gas near the unit
- There should not be any corrosive gas near the unit
- There should not be any salty air near the unit
- There should not be strong electromagnetic wave near the unit
- There should not be inflammable materials or gas near the unit
- There should not be strong voltage vibration.

2.2 Outdoor unit location selection

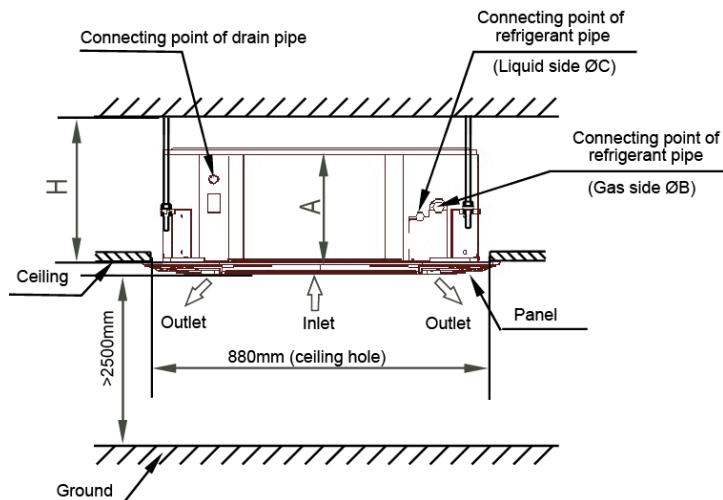
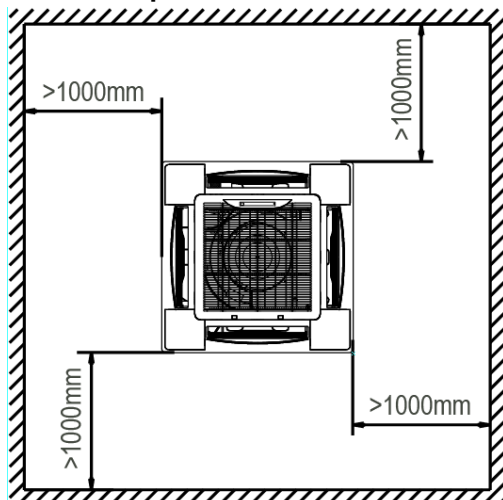
- The place shall easily support the outdoor unit's weight.
- Locate the outdoor unit as close to indoor unit as possible
- The piping length and height drop can not exceed the allowable value.
- The place where the noise, vibration and outlet air do not disturb the neighbors.
- There is enough room for installation and maintenance.
- The air outlet and the air inlet are not impeded, and not face the strong wind.
- It is easy to install the connecting pipes and cables.
- There is no danger of fire due to leakage of inflammable gas.
- It should be a dry and well ventilation place
- The support should be flat and horizontal
- Do not install the outdoor unit in a dirty or severely polluted place, so as to avoid blockage of the heat exchanger in the outdoor unit.
- If is built over the unit to prevent direct sunlight, rain exposure, direct strong wind, snow and other scraps accumulation, make sure that heat radiation from the condenser is not restricted.



3. Indoor unit installation

3.1 Super slim cassette indoor unit installation

3.1.1 Service space for indoor unit

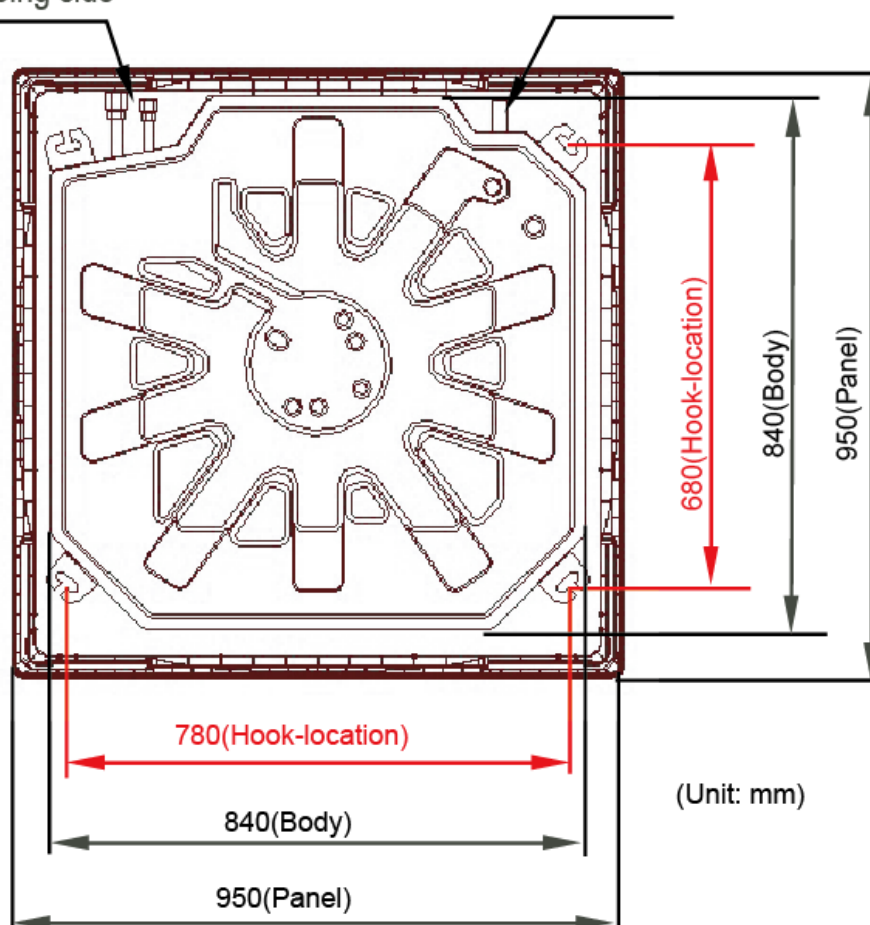


Model	A	H
AWSI-KBD024-N11	245	>275
AWSI-KBD030-N11	245	>275
AWSI-KBD036-N11	245	>275
AWSI-KBD048-N11	287	>317

3.1.2 Bolt pitch

Tubing side

Drain side



(Unit: mm)

3.1.3 Install the pendant bolt

Select the position of installation hooks according to the hook holes positions showed in upper picture. Drill four holes of $\varnothing 12\text{mm}$, 45~50mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).

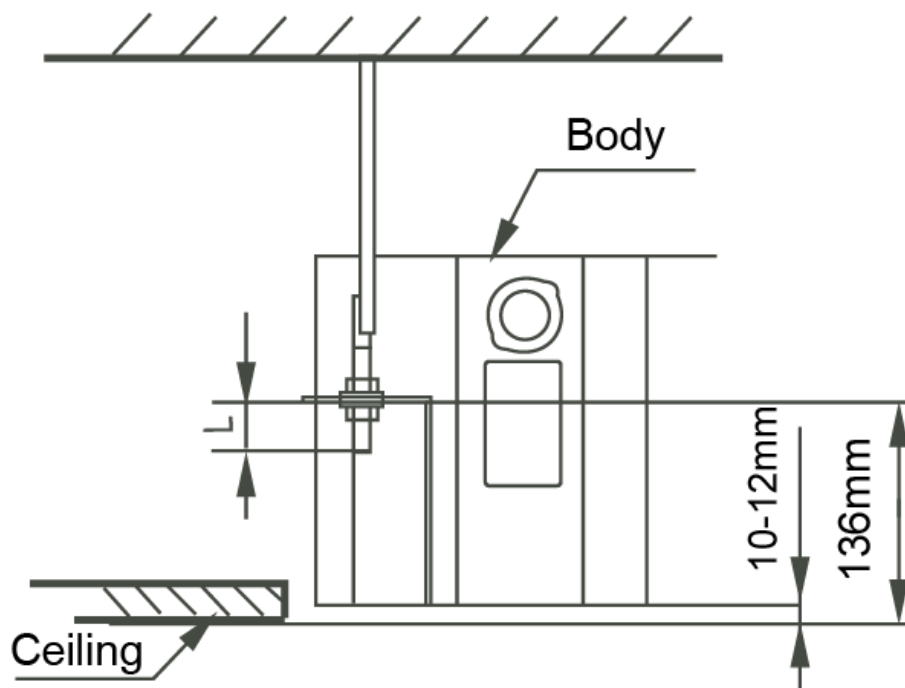


3.1.4 Install the main body

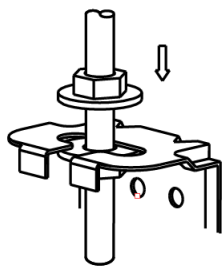
Make the 4 suspender through the 4 hanger of the main body to suspend it. Adjust the hexangular nuts on the four installation hooks evenly, to ensure the balance of the body. Use a leveling instrument to make sure the levelness of the main body is within $\pm 1^\circ$.



Adjust the position to ensure the gaps between the body and the four sides of ceiling are even. The body's lower part should sink into the ceiling for 10~12 mm. In general, L is half of the screw length of the installation hook.

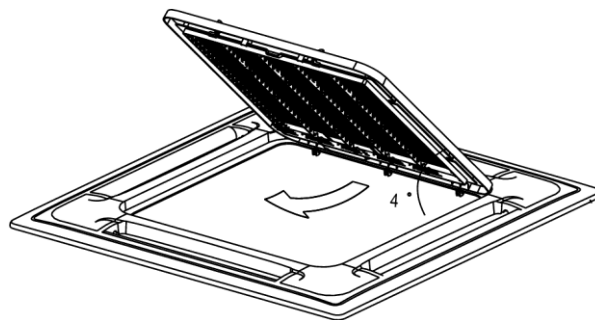
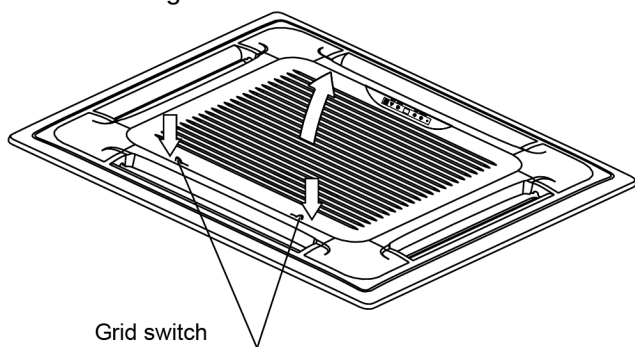


Locate the air conditioner firmly by wrenching the nuts after having adjusted the body's position well.

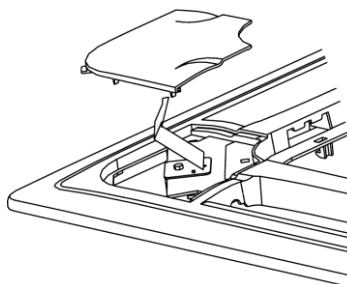


3.1.5 Install the panel

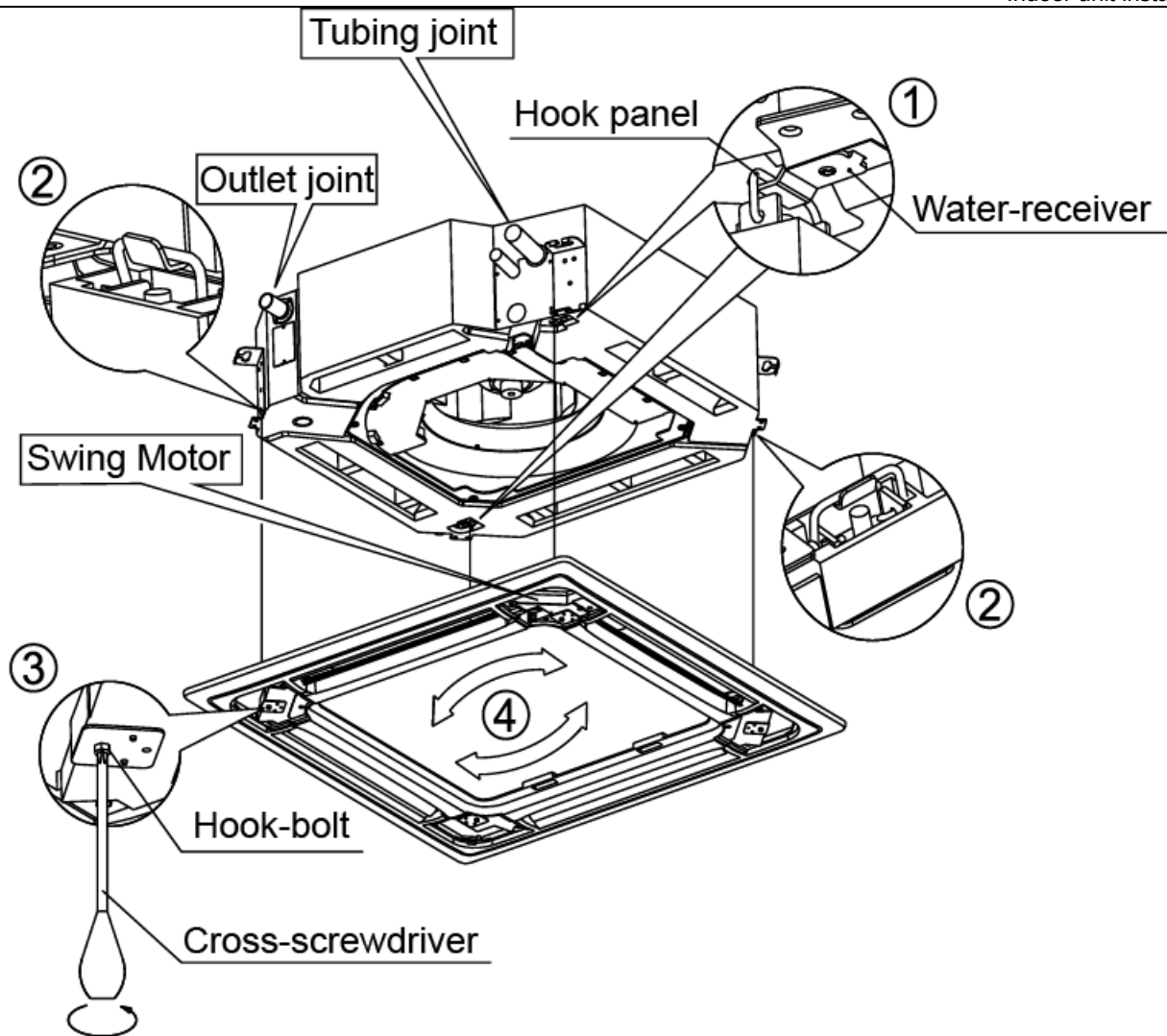
Remove the grille



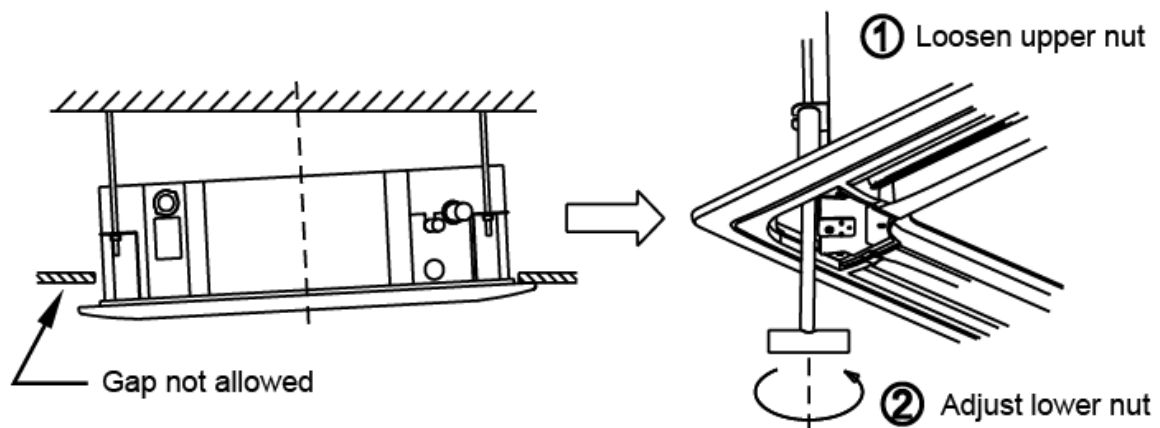
Remove the 4 corner covers.

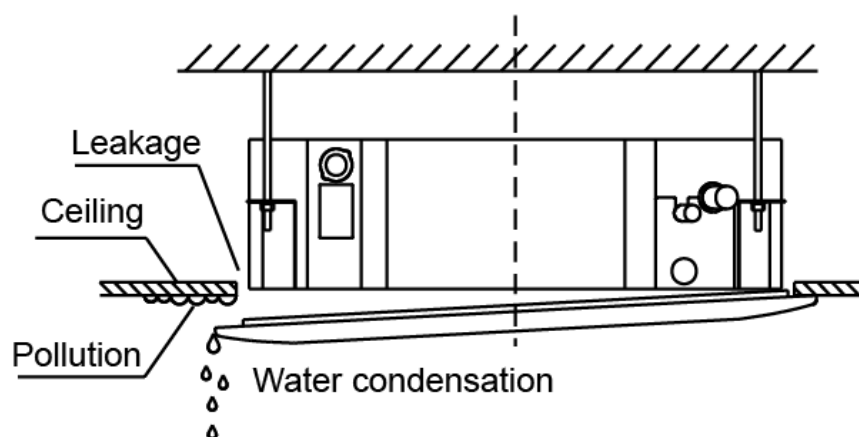


Hang the panel to the hooks on the mainbody. If the panel is with auto-lift grille, please watch the ropes lifting the grille, DO NOT make the ropes entwined or blocked.



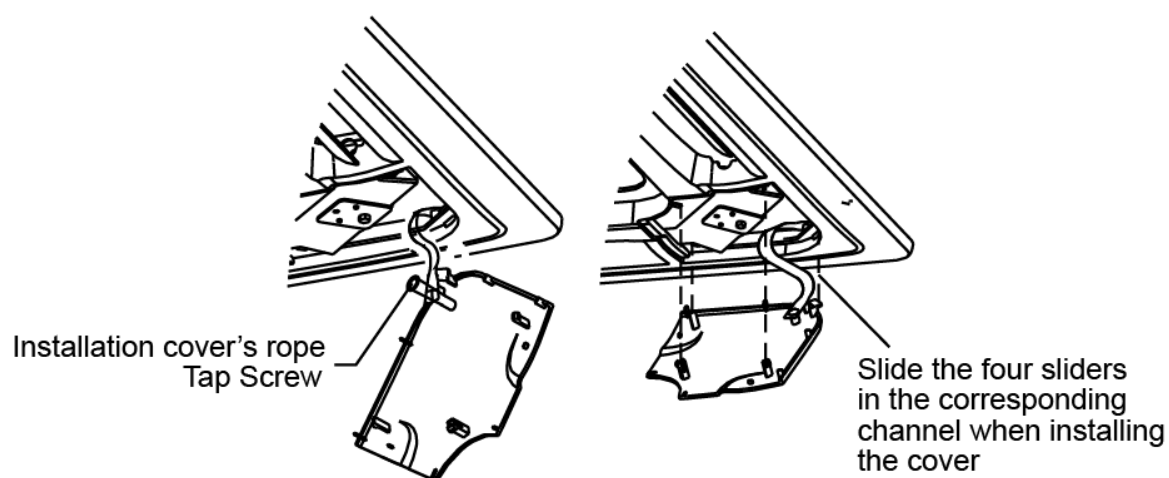
Tighten the screws under the panel hooks till the panel closely stick on the ceiling to avoid condensate water.





Hang the air-in grill to the panel, then connect the lead terminator of the swing motor and that of the control box with corresponding terminators on the body respectively.

Install the 4 corner covers back.

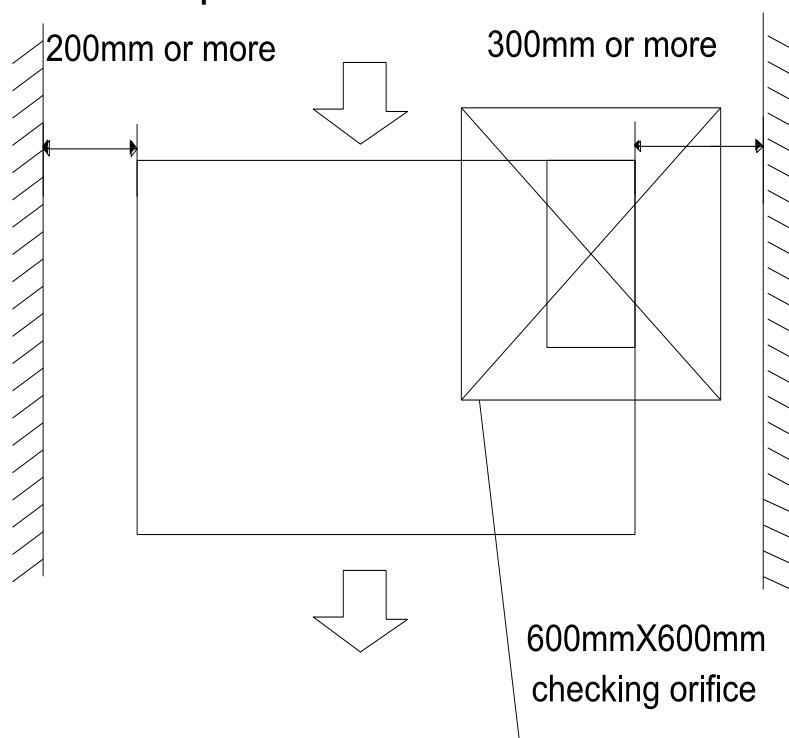


Note: The panel shall be installed after the wiring connected.

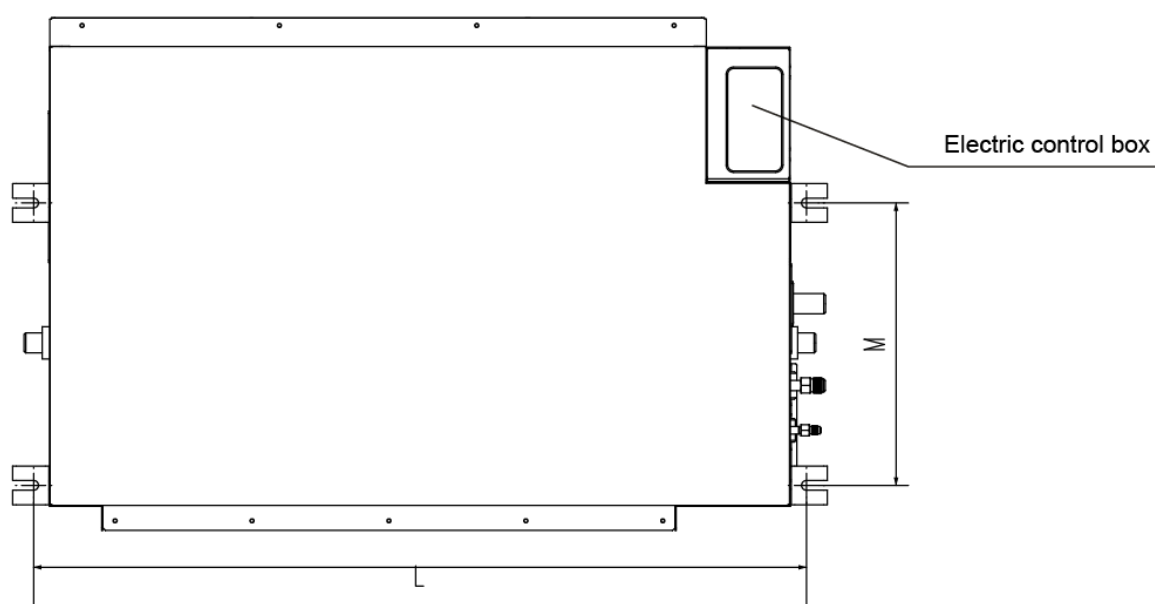
3.2 Duct indoor unit installation

AWSI-OCD012-N11,AWSI-OCD018-N11,AWSI-OCD024-N11,AWSI-OCD030-N11,AWSI-OCD036-N11, AWSI-OCD048-N11

3.2.1 Service space for indoor unit



3.2.2 Bolt pitch



Model	Size of outline dimension mounted plug	
	L	M
AWSI-OCD012-N11	740	350
AWSI-OCD018-N11	960	350
AWSI-OCD024-N11	960	350
AWSI-OCD030-N11	1180	490
AWSI-OCD036-N11	1180	490
AWSI-OCD048-N11	1240	500

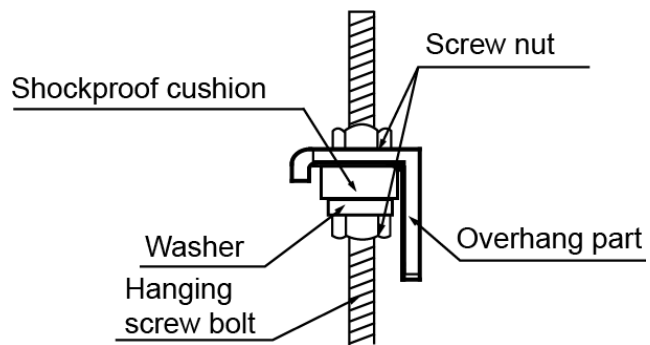
3.2.3 Install the pendant bolt

Select the position of installation hooks according to the hook holes positions showed in upper picture. Drill four holes of $\varnothing 12\text{mm}$, 45~50mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).



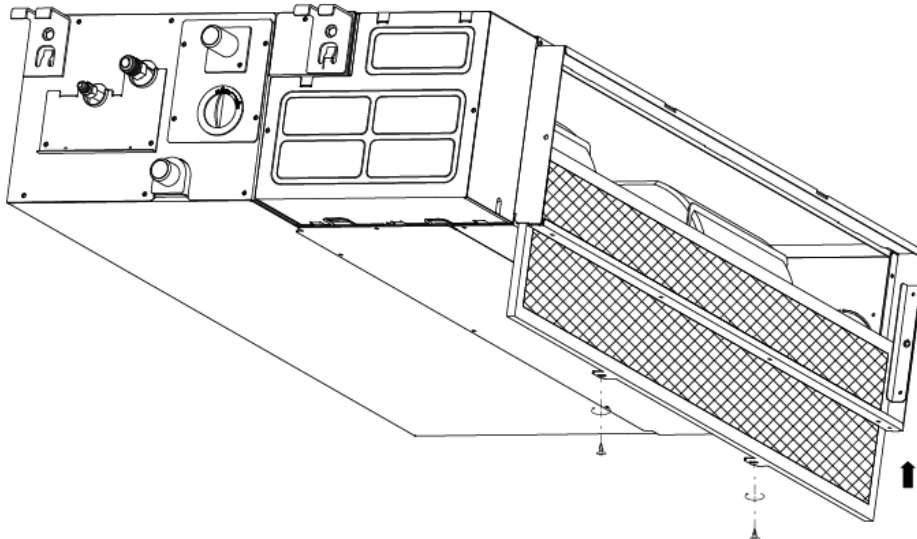
3.2.4 Install the main body

Make the 4 suspender through the 4 hanger of the main body to suspend it. Adjust the hexangular nuts on the four installation hooks evenly, to ensure the balance of the body. Use a leveling instrument to make sure the levelness of the main body is within $\pm 1^\circ$.



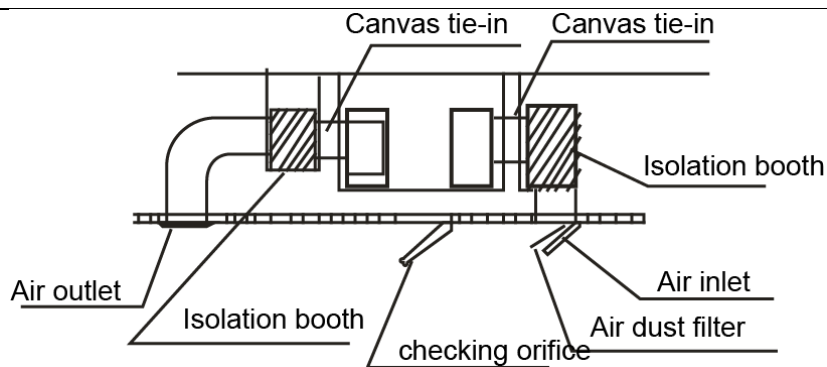
3.2.5 Install the air filter

Insert the air filter through the filter slot and fix it with 2 screws.



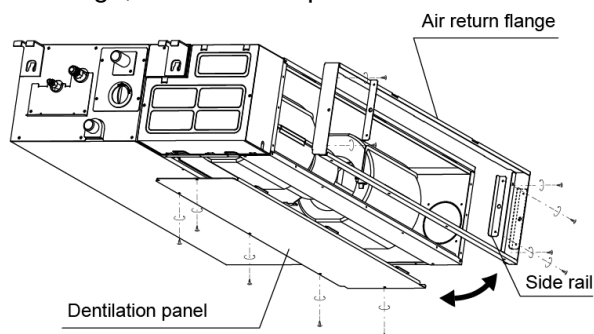
3.2.6 Install the air duct

Please design the air duct as below recommended picture

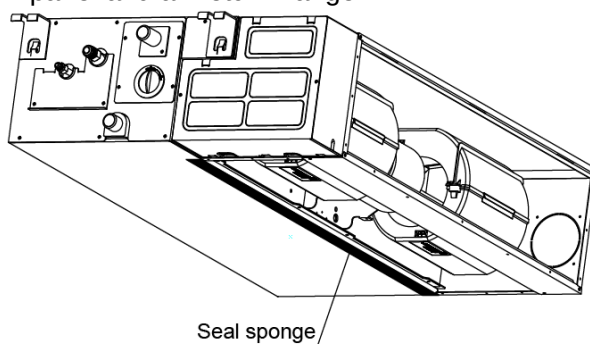


3.2.7 Change the air inlet direction

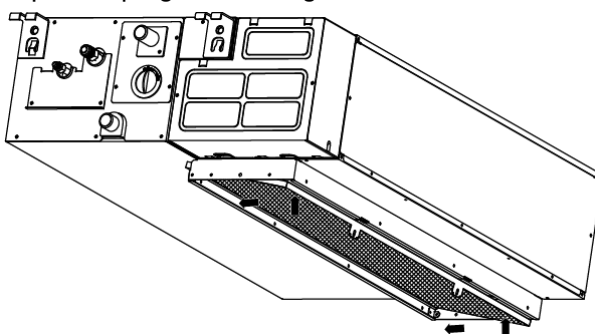
- ① Take off ventilation panel and flange, cut off the staples at side rail.



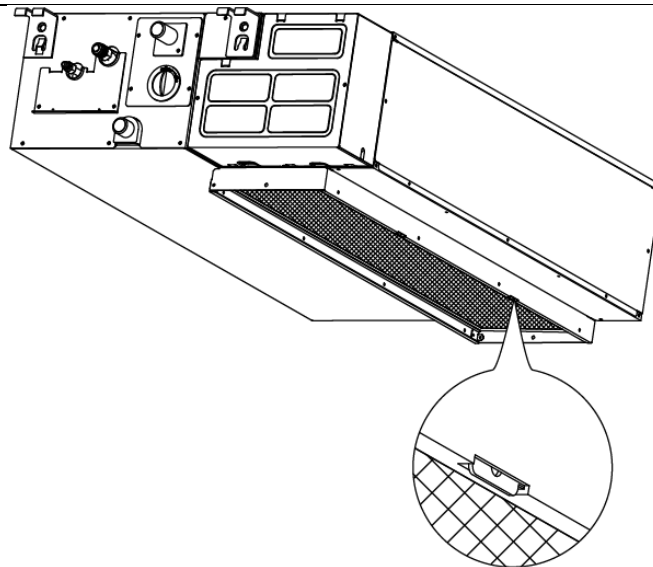
- ② Stick the attached seal sponge as per the indicating place in the following fig, and then change the mounting positions of air return panel and air return flange .



- ③ When install the filter mesh, please plug it into flange inclined from air return opening, and then push up.

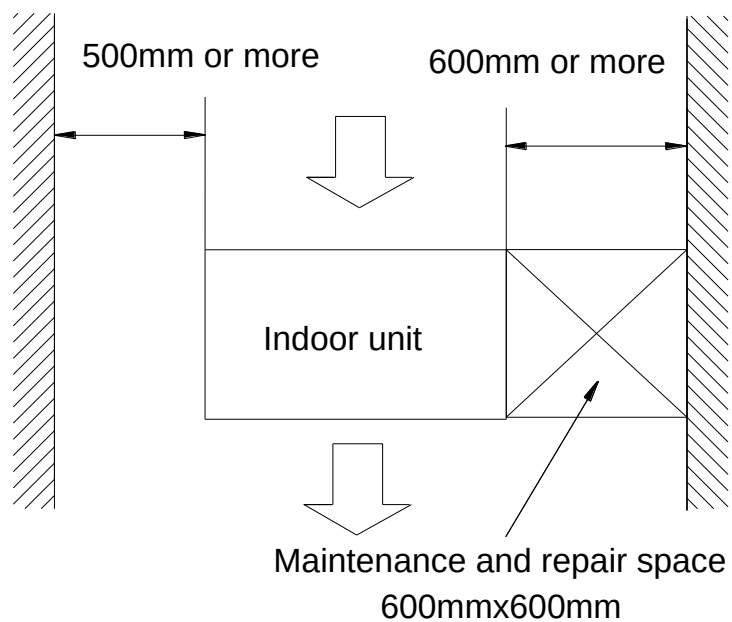


- ④ The installation has finish, upon filter mesh which fixing blocks have been insert to the flange positional holes.

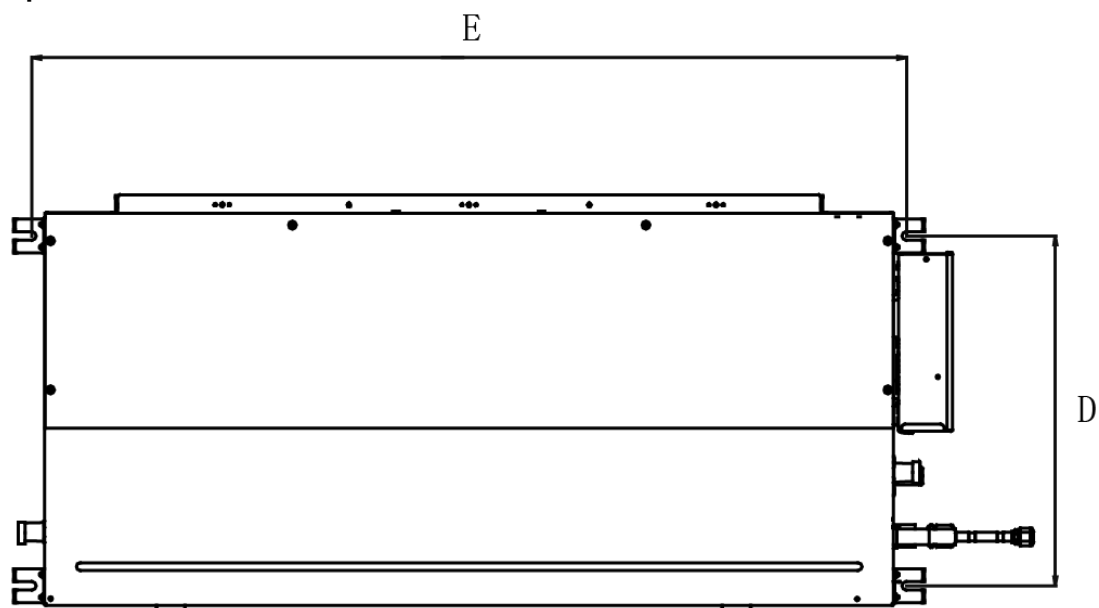


AWSI-OCD060-N11

3.2.1 Service space for indoor unit



3.2.2 Bolt pitch



Model	Size of mounted lug	
	D	E
AWSI-OCD060-N11	700	1436

3.2.3 Install the pendant bolt

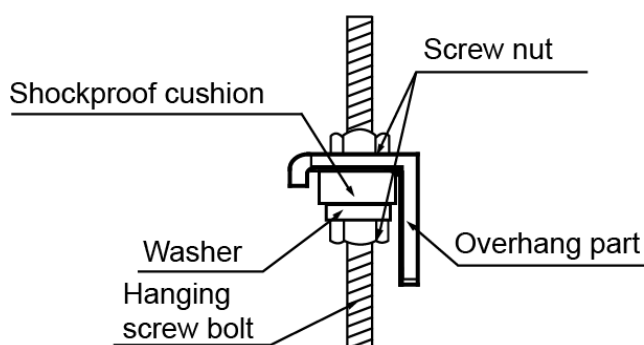
Select the position of installation hooks according to the hook holes positions showed in upper picture.

Drill four holes of $\varnothing 12\text{mm}$, 45~50mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).



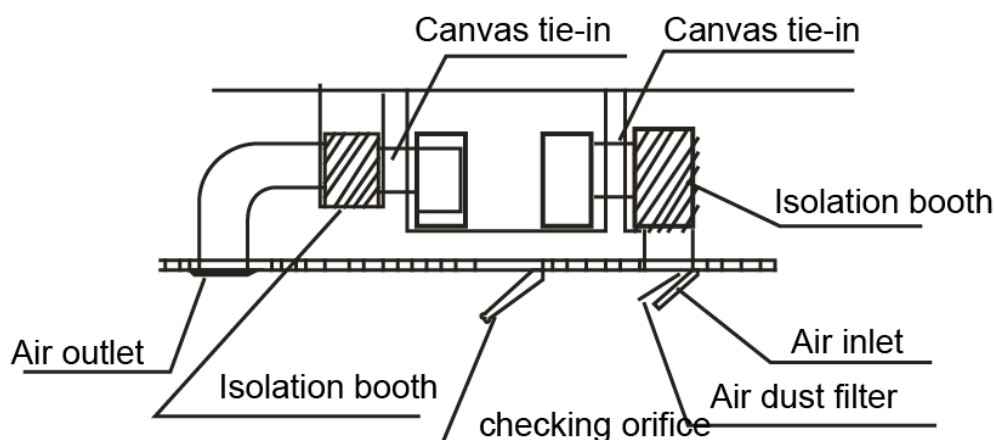
3.2.4 Install the main body

Make the 4 suspender through the 4 hanger of the main body to suspend it. Adjust the hexangular nuts on the four installation hooks evenly, to ensure the balance of the body. Use a leveling instrument to make sure the levelness of the main body is within $\pm 1^\circ$.



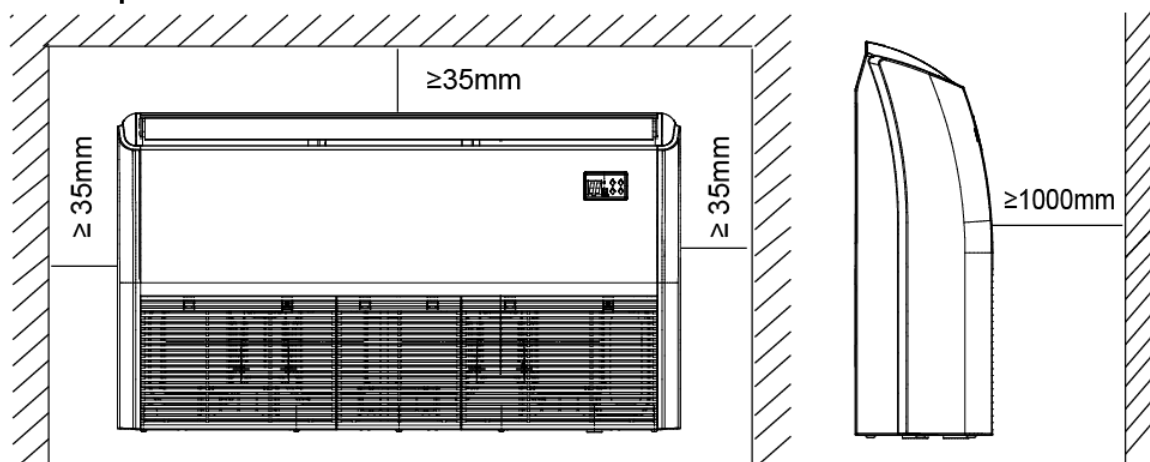
3.2.5 Install the air duct

Please design the air duct as below recommended picture



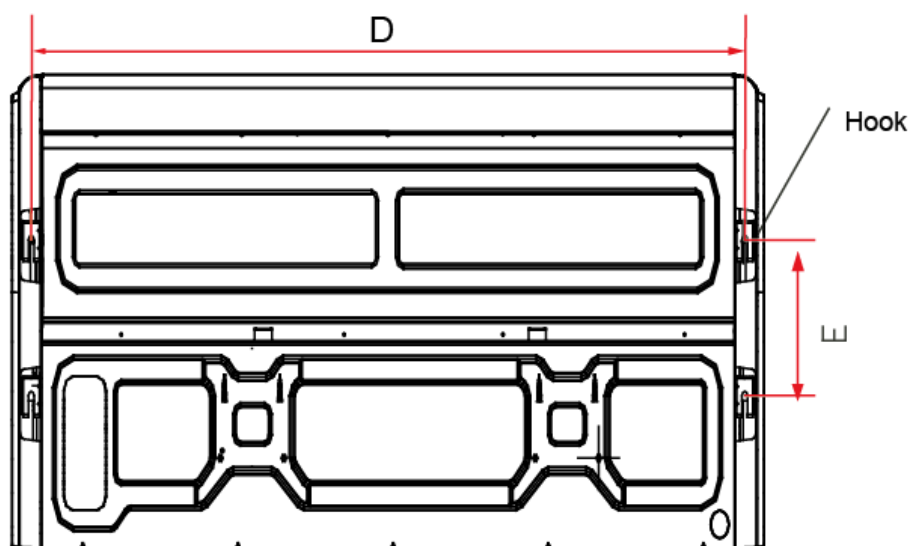
3.3 Ceiling & floor indoor unit installation

3.3.1 Service space for indoor unit



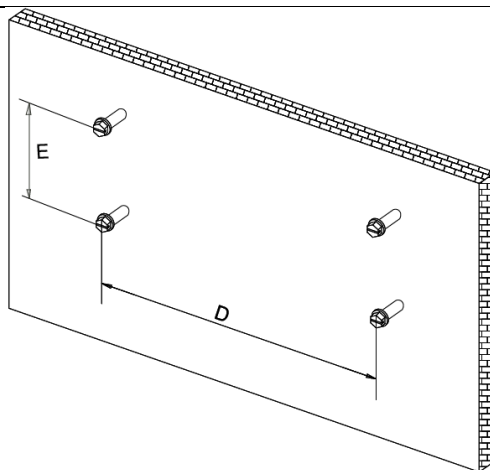
3.3.2 Bolt pitch

① Ceiling installation



Model	D	E
AWSI-TBD018-N11	983	220
AWSI-TBD024-N11	983	220
AWSI-TBD030-N11	1200	220
AWSI-TBD036-N11	1200	220
AWSI-TBD048-N11	1565	220

② Wall-mounted installation



3.3.3 Install the pendant bolt

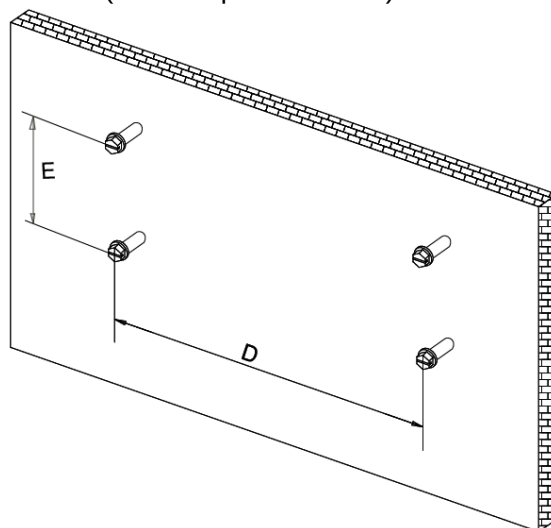
① Ceiling installation

Select the position of installation hooks according to the hook holes positions showed in upper picture. Drill four holes of $\varnothing 12\text{mm}$, 45~50mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).



② Wall-mounted installation

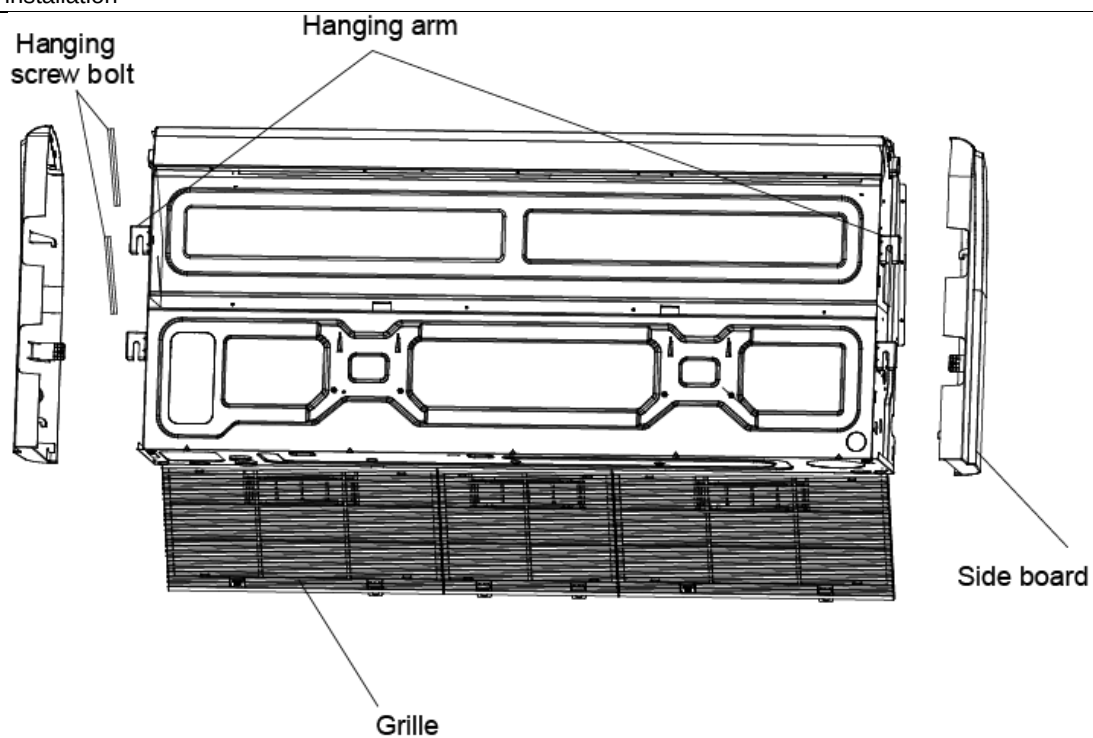
Install the tapping screws onto the wall. (Refer to picture below)



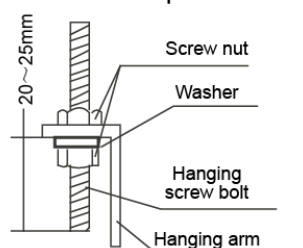
3.3.4 Install the main body

① Ceiling installation (The only installation method for the unit with drain pump)

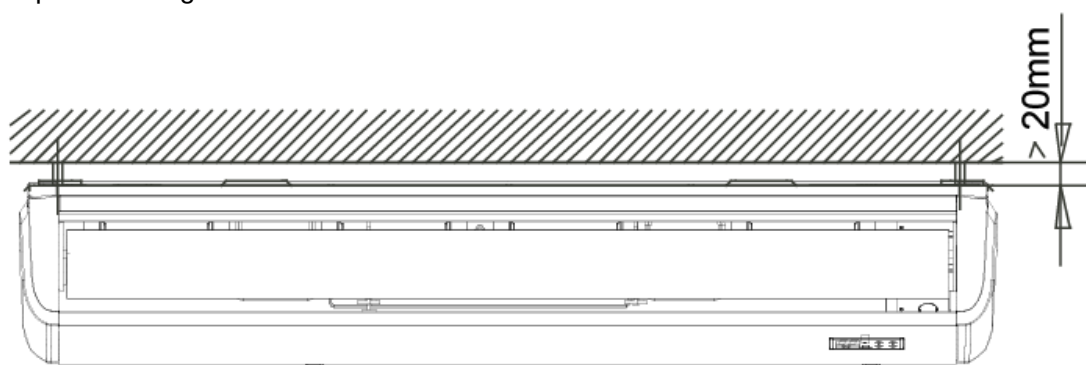
Remove the side board and the grille.

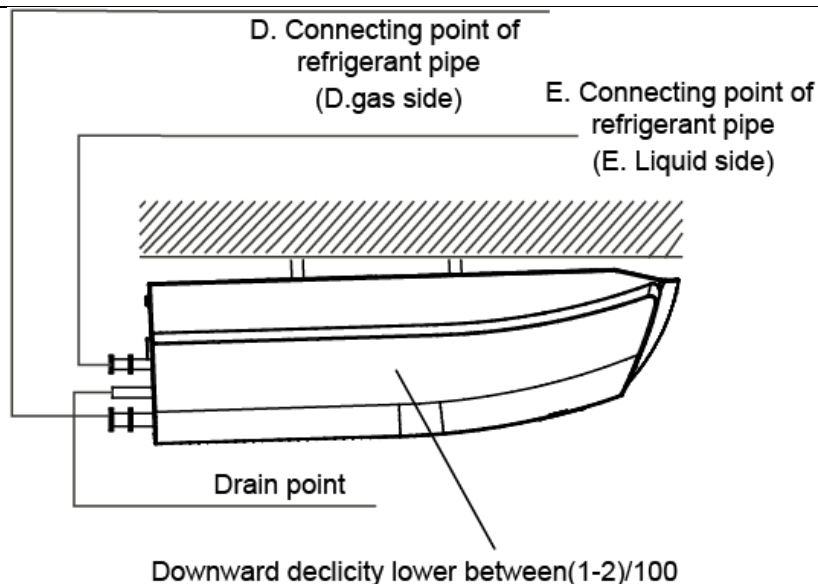


Locate the hanging arm on the hanging screw bolt. Prepare the mounting bolts on the unit.



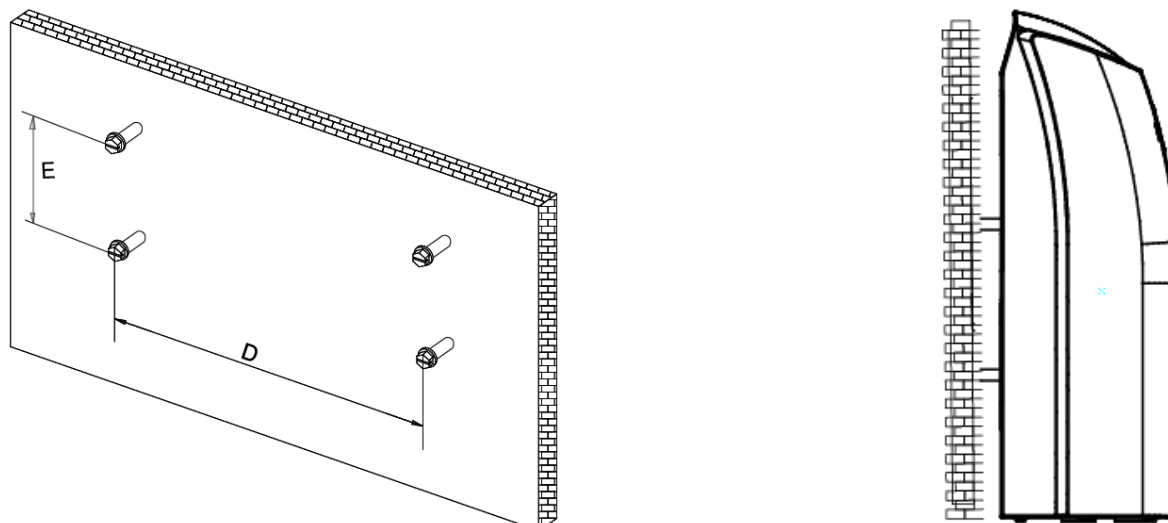
Put the side panels and grilles back.





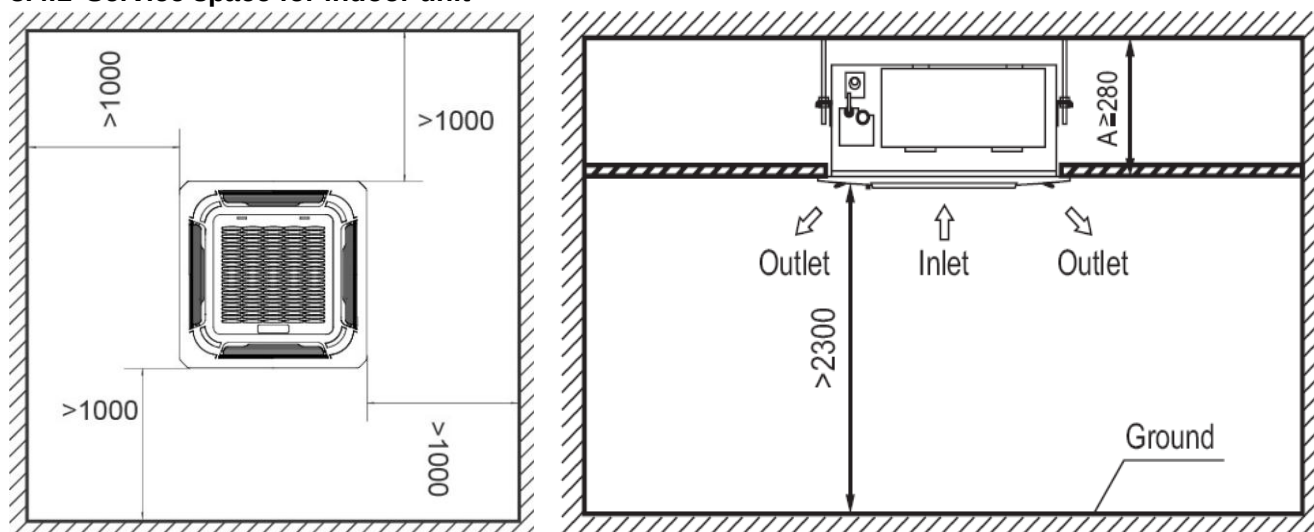
② Wall-mounted installation

Hang the indoor unit by insert the tapping screws into the hanging arms on the main unit. (The bottom of body can touch with floor or suspended, but the body must install vertically.)

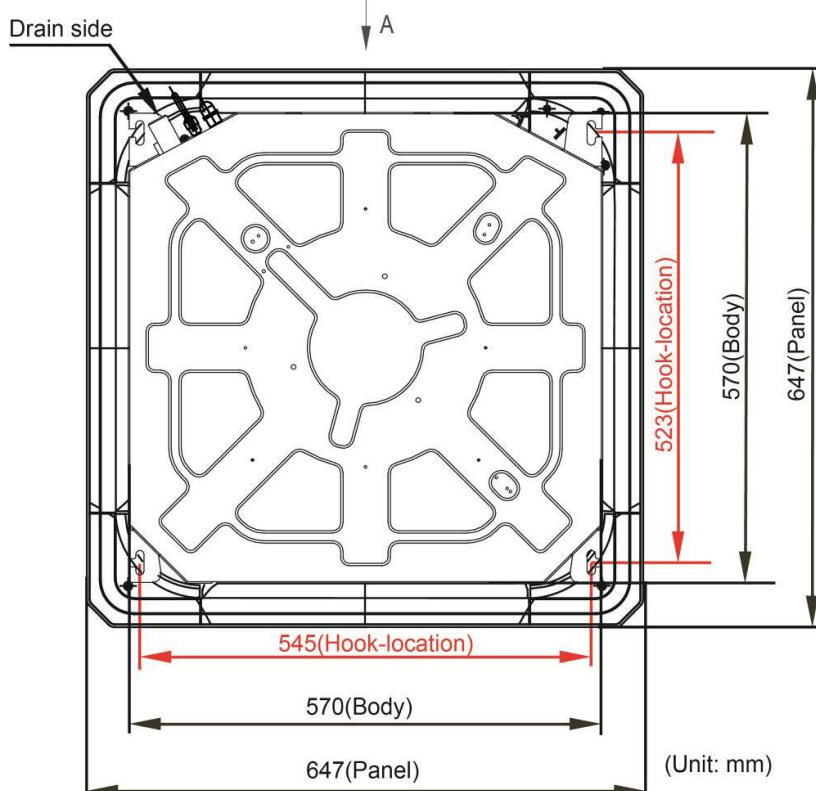


3.4 Compact cassette indoor unit installation

3.4.1 Service space for indoor unit



3.4.2 Bolt pitch



3.4.3 Install the pendant bolt

Select the position of installation hooks according to the hook holes positions showed in upper picture. Drill four holes of $\varnothing 12\text{mm}$, 45~50mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).

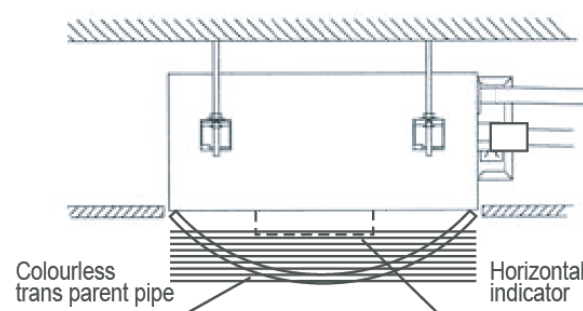


Face the concave side of the installation hooks toward the expansible hooks. Determine the length of the installation hooks from the height of ceiling, then cut off the unnecessary part.

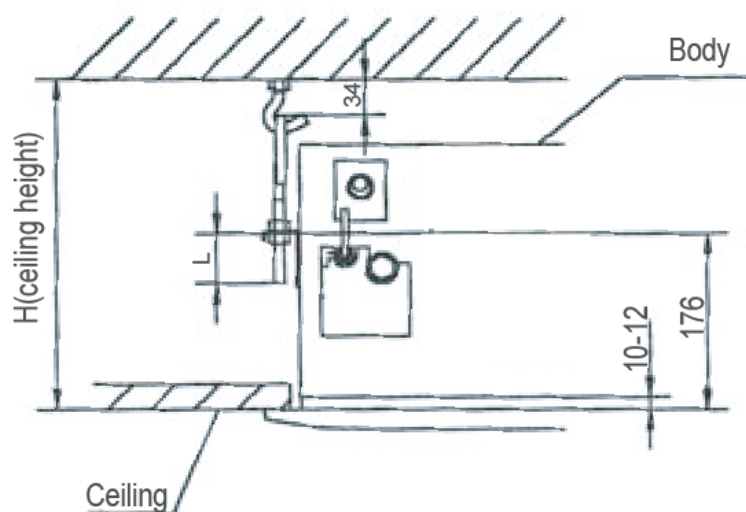
If the ceiling is extremely high, please determine the length of the installation hook depending on the real situation.

3.4.4 Install the main body

Make the 4 suspender through the 4 hanger of the main body to suspend it. Adjust the hexangular nuts on the four installation hooks evenly, to ensure the balance of the body. Use a leveling instrument to make sure the levelness of the main body is within $\pm 1^\circ$.



Adjust the position to ensure the gaps between the body and the four sides of ceiling are even. The body's lower part should sink into the ceiling for 10~12 mm. In general, L is half of the screw length of the installation hook.

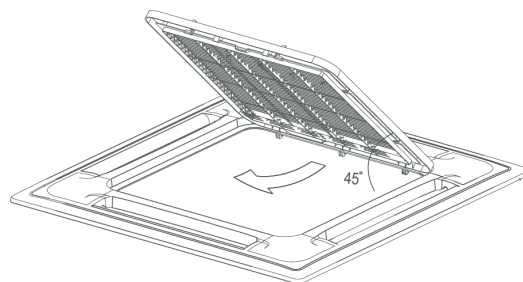
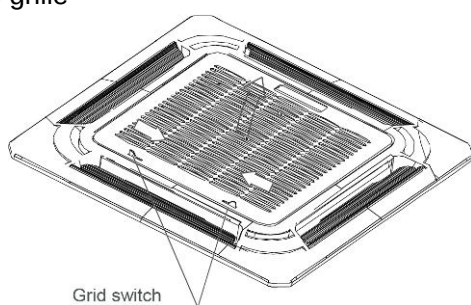


Locate the air conditioner firmly by wrenching the nuts after having adjusted the body's position well.

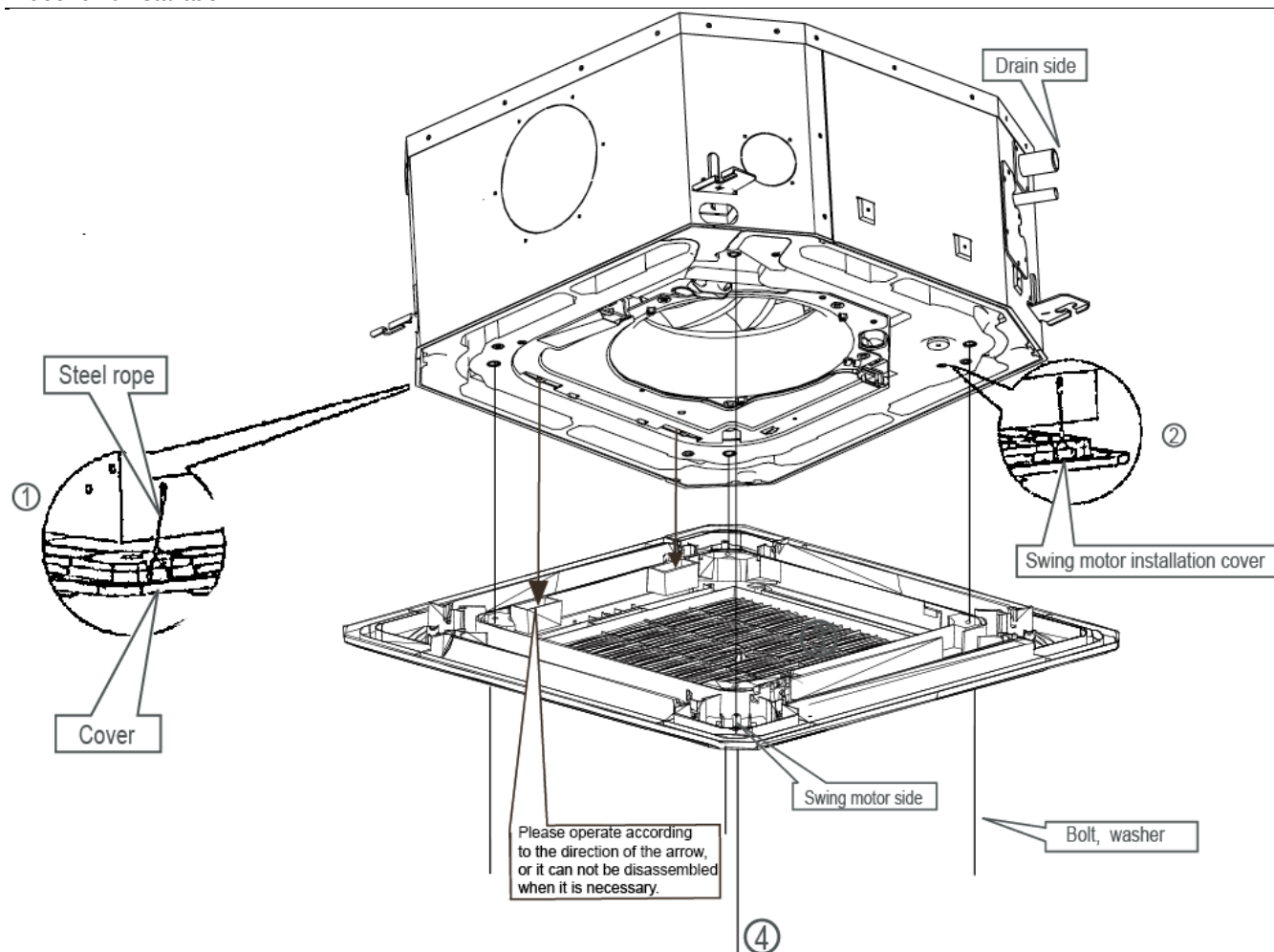


3.4.5 Install the panel

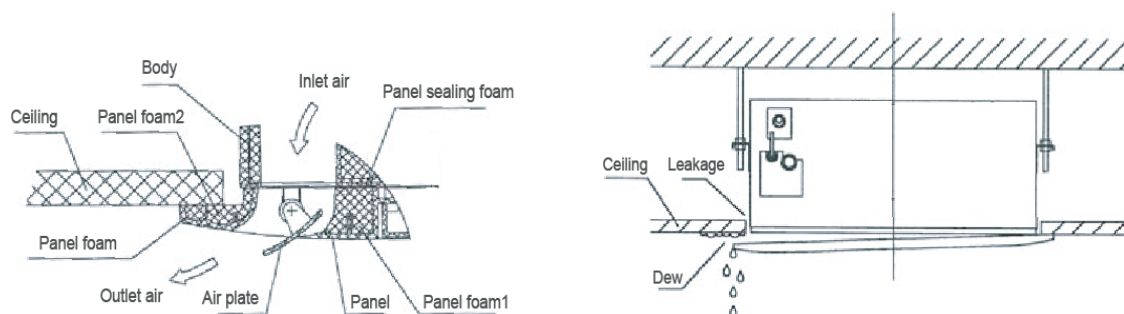
Remove the grille



Hang the panel to the hooks on the mainbody.



Tighten the screws under the panel hooks till the panel closely stick on the ceiling to avoid condensate water.

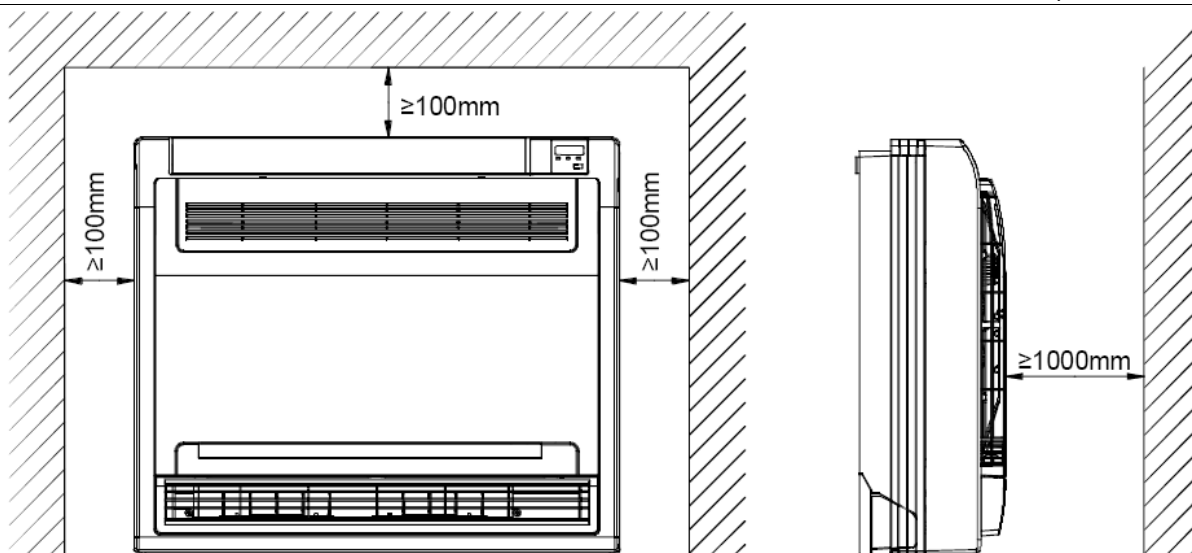


Hang the air-in grill to the panel, then connect the lead terminator of the swing motor and that of the control box with corresponding terminators on the body respectively.

Note: The panel shall be installed after the wiring connected.

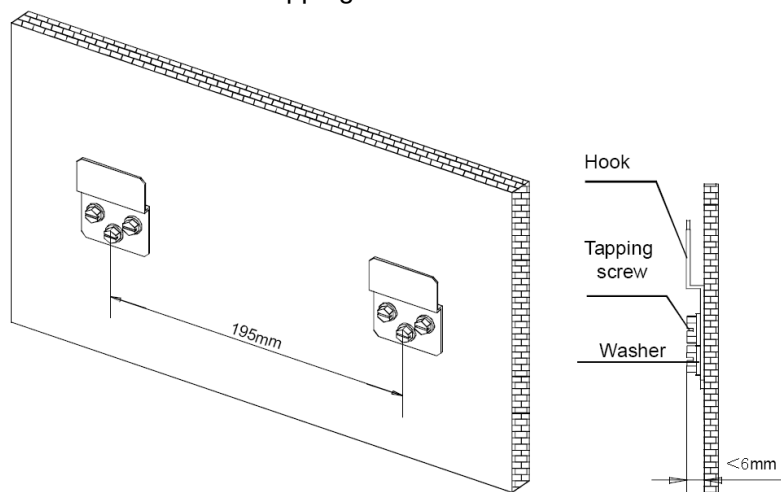
3.5 Console indoor unit installation

3.5.1 Service space for indoor unit

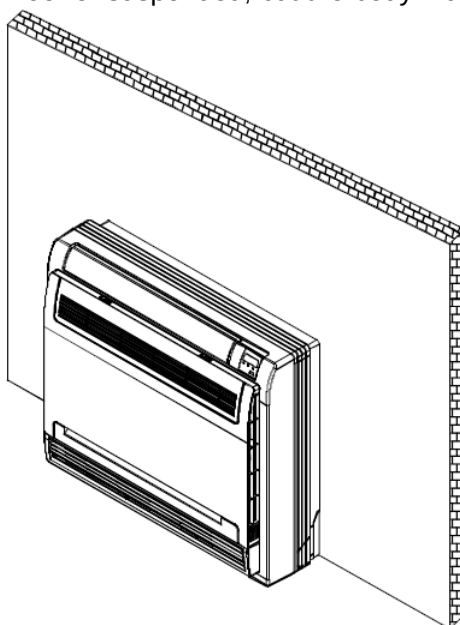


3.5.2 Install the main body

- Fix the hook with tapping screw onto the wall

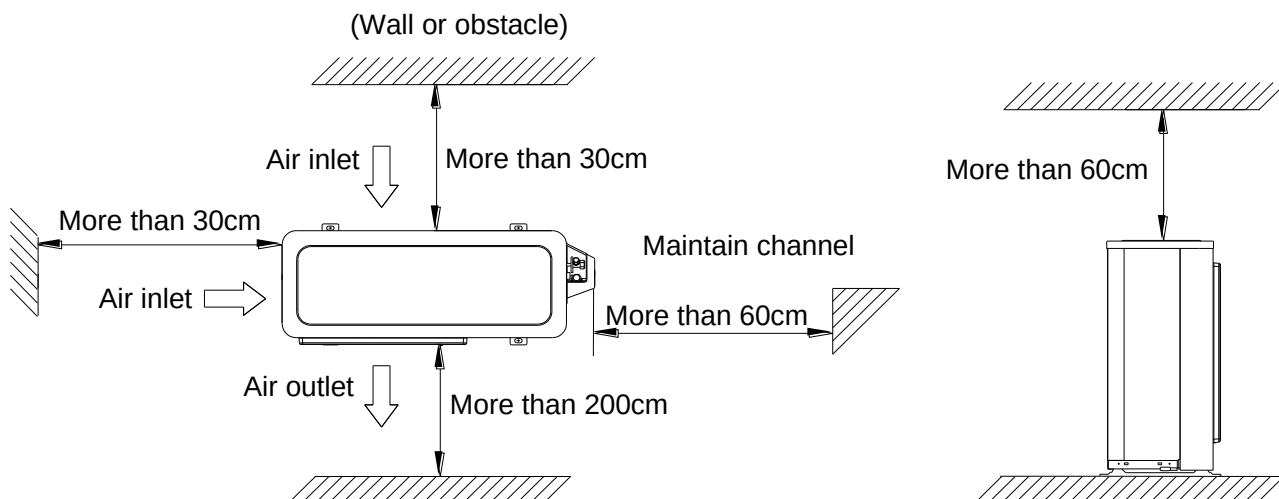


- Hang the indoor unit on the hook.
(The bottom of body can touch with floor or suspended, but the body must install vertically.)

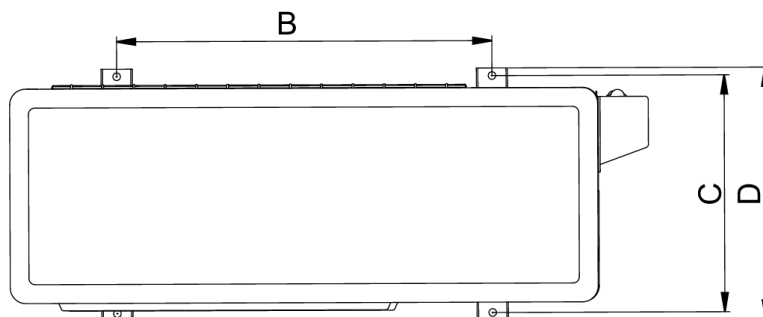


4. Outdoor unit installation (Side Discharge Unit)

4.1 Service space for outdoor unit



4.2 Bolt pitch



Model	B	C	D
AWAU-VLD012-H11	530	290	315
AWAU-VLD018-H11	560	335	360
AWAU-VLD024-H11	590	333	355
AWAU-VLD030-H11	590	333	355
AWAU-VLD036-H11	624	366	396
AWAU-VLD036-H13	624	366	396
AWAU-VLD048-H13	633.5	404	448
AWAU-VLD060-H13	633.5	404	448

4.3 Install the Unit

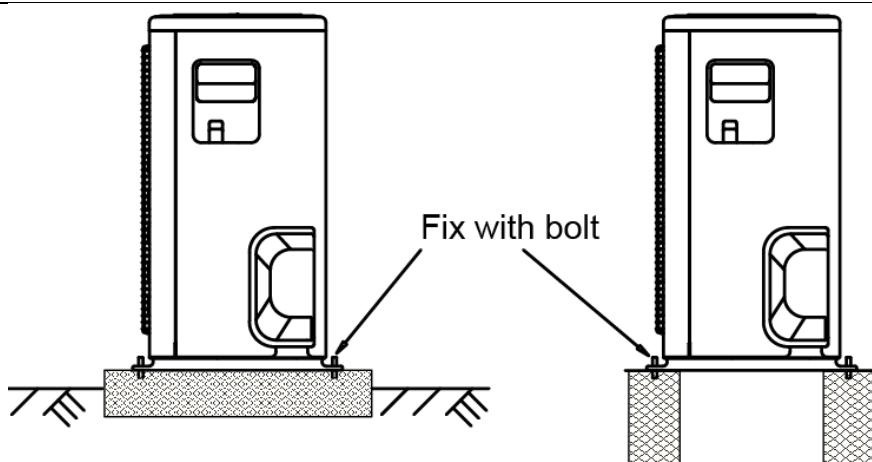
Since the gravity center of the unit is not at its physical center, so please be careful when lifting it with a sling. Never hold the inlet of the outdoor unit to prevent it from deforming.

Do not touch the fan with hands or other objects.

Do not lean it more than 45°, and do not lay it sidelong.

Make concrete foundation according to the specifications of the outdoor units.

Fasten the feet of this unit with bolts firmly to prevent it from collapsing in case of earthquake or strong wind.



5. Refrigerant pipe installation

5.1 Maximum pipe length and height drop

Considering the allowable pipe length and height drop to decide the installation position. Make sure the distance and height drop between indoor and outdoor unit not exceeded the data in the following table.

Capacity	Max. Length	Max. Elevation
12,000Btu/h	25m	10m
18,000Btu/h	30m	20m
24,000Btu/h~30,000Btu/h	50m	25m
36,000Btu/h ~60,000Btu/h	65m	30m

5.2 The procedure of connecting pipes

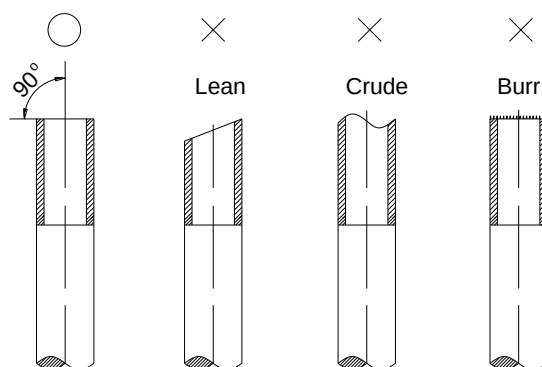
5.2.1 Choose the pipe size according to the specification table.

5.2.2 Confirm the cross way of the pipes.

5.2.3 Measure the necessary pipe length.

5.2.4 Cut the selected pipe with pipe cutter

- Make the section flat and smooth.

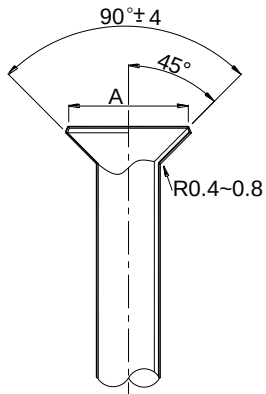


5.2.5 Insulate the copper pipe

- Before test operation, the joint parts should not be heat insulated.

5.2.6 Flare the pipe

- Insert a flare nut into the pipe before flaring the pipe
- According to the following table to flare the pipe

Pipe diameter	Flare dimension A (mm)		Flare shape
	Min	Max	
1/4" (6.35)	8.3	8.7	
3/8" (9.52)	12.0	12.4	
1/2" (12.7)	15.4	15.8	
5/8" (15.9)	18.6	19.1	
3/4" (19)	22.9	23.3	

- After flared the pipe, the opening part must be seal by end cover or adhesive tape to avoid duct or exogenous impurity come into the pipe.

5.2.7 Drill holes if the pipes need to pass the wall.

5.2.8 According to the field condition to bend the pipes so that it can pass the wall smoothly.

5.2.9 Bind and wrap the wire together with the insulated pipe if necessary.

5.2.10 Set the wall conduit

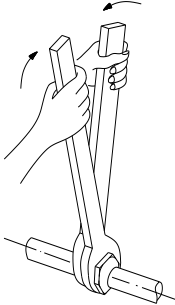
5.2.11 Set the supporter for the pipe.

5.2.12 Locate the pipe and fix it by supporter

- For horizontal refrigerant pipe, the distance between supporters should not be exceed 1m.
- For vertical refrigerant pipe, the distance between supporters should not be exceed 1.5m.

5.2.13 Connect the pipe to indoor unit and outdoor unit by using two spanners.

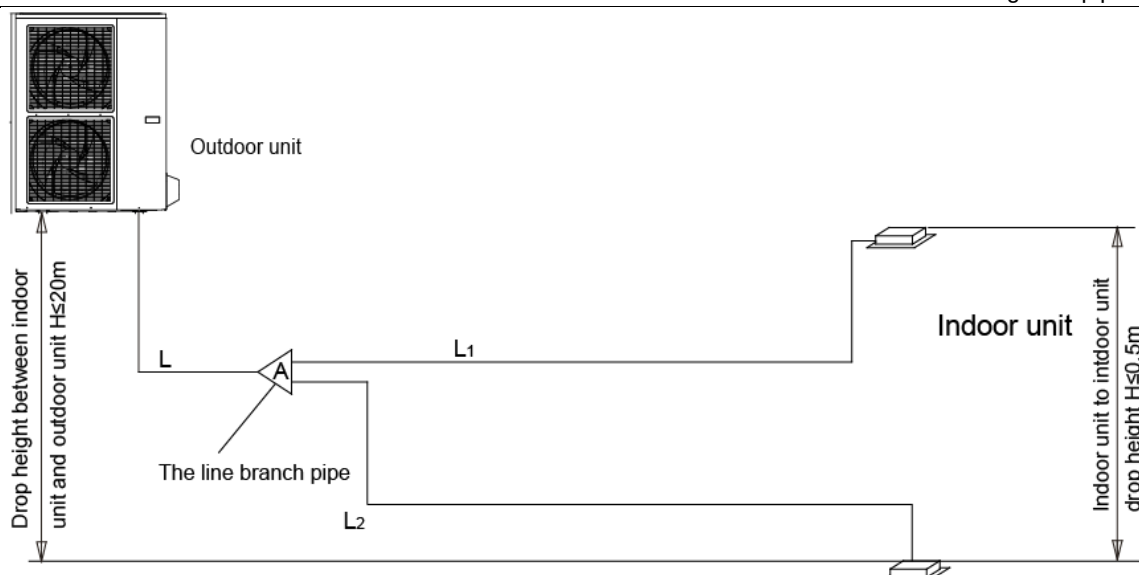
- Be sure to use two spanners and proper torque to fasten the nut, too large torque will damage the bellmouthing, and too small torque may cause leakage. Refer the following table for different pipe connection.

Pipe Diameter	Torque		Sketch map
	(kgf.cm)	(N.cm)	
1/4" (6.35)	144~176	1420~1720	
3/8" (9.52)	333~407	3270~3990	
1/2" (12.7)	504~616	4950~6030	
5/8" (15.9)	630~770	6180~7540	
3/4" (19)	990~1210	9270~11860	

5.3 For Units with Twins Function

5.3.1 Length and drop height permitted of the refrigerant piping

Note: Reduced length of the branching tube is the 0.5m of the equivalent length of the pipe.



Note: All used branch pipe must be produced by Electra, otherwise it causes malfunction. The indoor units should be installed equivalently at the both side of the U type branch pipe.

		Permitted Value		Piping
Pipe Length	Total pipe length (Actual)	18K+18K	30m	L+L1+L2
		24K+24K	50m	
		30K+30K	50m	
	Max. branch pipe length		15m	L1, L2
Drop Height	Max. branch pipe length difference		10m	L1-L2
	Max. height difference between indoor unit and outdoor unit		20m	H1
	Max. height difference between indoor units		0.5m	H2

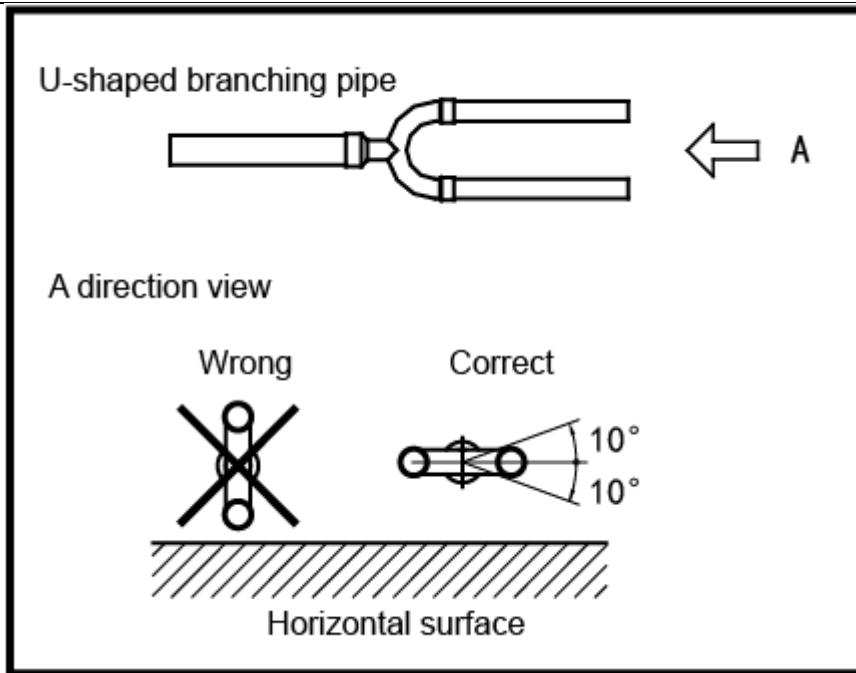
5.3.2 Size of joint pipes for indoor unit (R410a)

Capacity of indoor unit (A)	Size of main pipe(mm)		
	Gas side	Liquid side	Available branching pipe
18K	Φ12.7	Φ6.35	CE-FQZHN-01C
24K	Φ15.9	Φ9.5	CE-FQZHN-01C
30K	Φ15.9	Φ9.5	CE-FQZHN-01C

5.3.3 Size of joint pipes for outdoor unit (R410a)

Model	the size of main pipe(mm)		
	Gas side	Liquid side	The 1st branching pipe
36K	Φ15.9	Φ9.5	CE-FQZHN-01C
48K	Φ15.9	Φ9.5	CE-FQZHN-01C
60K	Φ15.9	Φ9.5	CE-FQZHN-01C

5.3.4 The branching pipe must be installed horizontally, error angle of it should not large than 10°. Otherwise, malfunction will be caused.



6. Drainage pipe installation

Install the drainage pipe as shown below and take measures against condensation. Improperly installation could lead to leakage and eventually wet furniture and belongings.

6.1 Installation principle

- Ensure at least 1/100 slope of the drainage pipe
- Adopt suitable pipe diameter
- Adopt nearby condensate water discharge

6.2 Key points of drainage water pipe installation

6.2.1 Considering the pipeline route and elevation

- Before installing condensate water pipeline, determine its route and elevation to avoid intersection with other pipelines and ensure slope is straight.

6.2.2 Drainage pipe selection

- The drainage pipe diameter shall not small than the drain hose of indoor unit
- According to the water flowrate and drainage pipe slope to choose the suitable pipe, the water flowrate is decided by the capacity of indoor unit.

Relationship between water flowrate and capacity of indoor unit

Capacity (x1000Btu)	Water flowrate (l/h)
12	2.4
18	4
24	6
30	7
36	8
42	10
48	12
60	14

According to the above table to calculate the total water flowrate for the confluence pipe selection.

For horizontal drainage pipe (The following table is for reference)

PVC pipe	Reference value of inner diameter of pipe (mm)	Allowable maximum water flowrate (l/h)		Remark
		Slope 1/50	Slope 1/100	
PVC25	20	39	27	For branch pipe
PVC32	25	70	50	
PVC40	31	125	88	Could be used for confluence pipe
PVC50	40	247	175	
PVC63	51	473	334	

Attention: Adopt PVC40 or bigger pipe to be the main pipe.

For Vertical drainage pipe (The following table is for reference)

PVC pipe	Reference value of inner diameter of pipe (mm)	Allowable maximum water flowrate (l/h)	Remark
PVC25	20	220	For branch pipe
PVC32	25	410	
PVC40	31	730	Could be used for confluence pipe
PVC50	40	1440	
PVC63	51	2760	
PVC75	67	5710	
PVC90	77	8280	

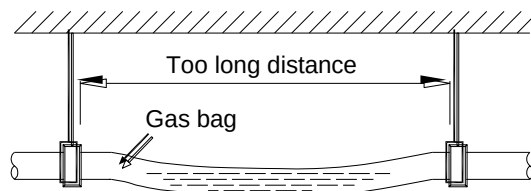
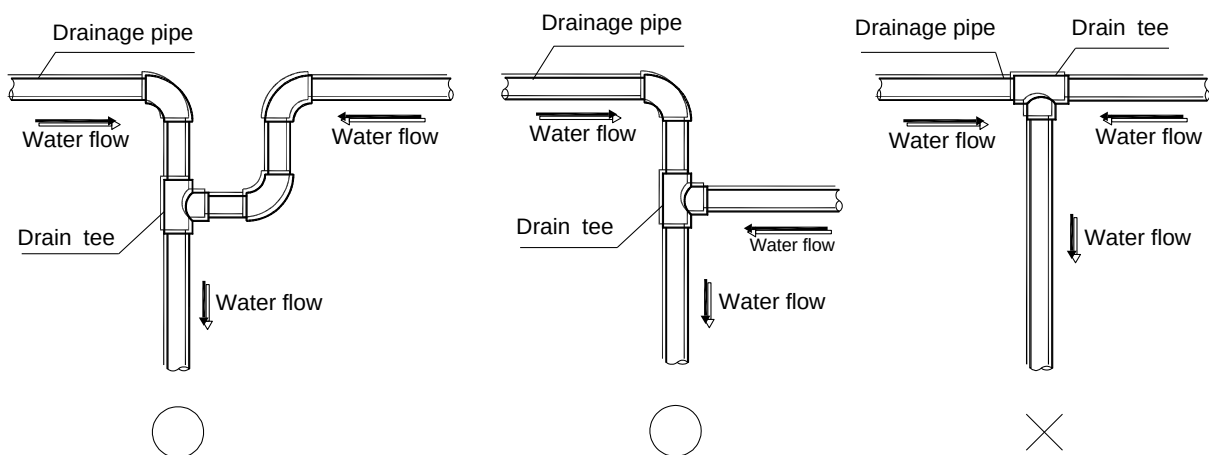
Attention: Adopt PVC40 or bigger pipe to be the main pipe.

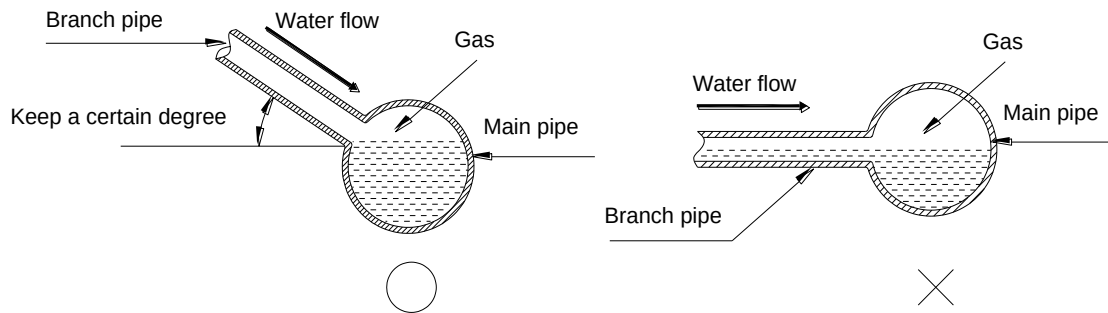
6.2.3 Individual design of drainage pipe system

- The drainage pipe of air conditioner shall be installed separately with other sewage pipe, rainwater pipe and drainage pipe in building.
- The drainage pipe of the indoor unit with water pump should be apart from the one without water pump.

6.2.4 Supporter gap of drainage pipe

- In general, the supporter gap of the drainage pipe horizontal pipe and vertical pipe is respectively 1m~1.5m and 1.5m~2.0m.
- Each vertical pipe shall be equipped with not less than two hangers.
- Overlarge hanger gap for horizontal pipe shall create bending, thus leading to air block.

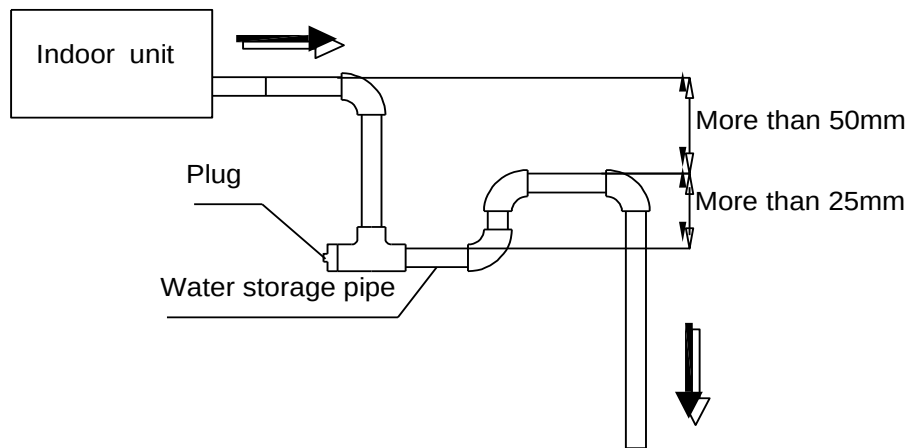
**6.2.5 The horizontal pipe layout should avoid converse flow or bad flow**



- The correct installation will not cause converse water flow and the slope of the branch pipes can be adjusted freely
- The false installation will cause converse water flow and the slope of the branch pipe can not be adjusted.

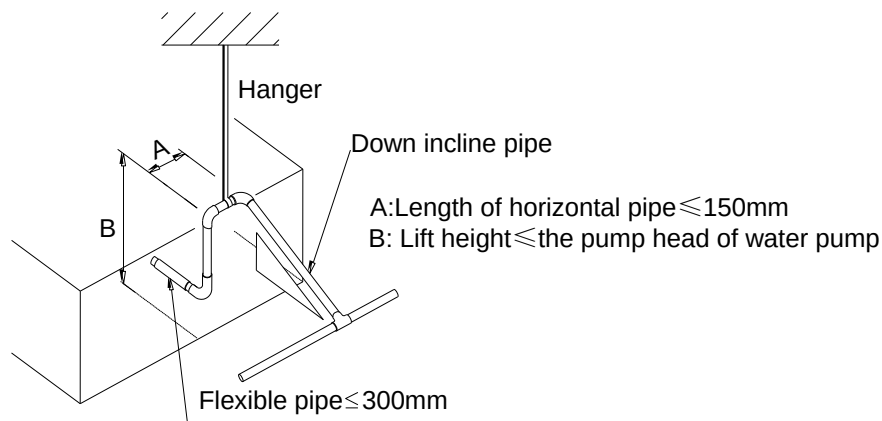
6.2.6 Water storage pipe setting

- If the indoor unit has high extra static pressure and without water pump to elevate the condensate water, such as high extra static pressure duct unit, the water storage pipe should be set to avoid converse flow or blow water phenomena.



6.2.7 Lifting pipe setting of indoor unit with water pump

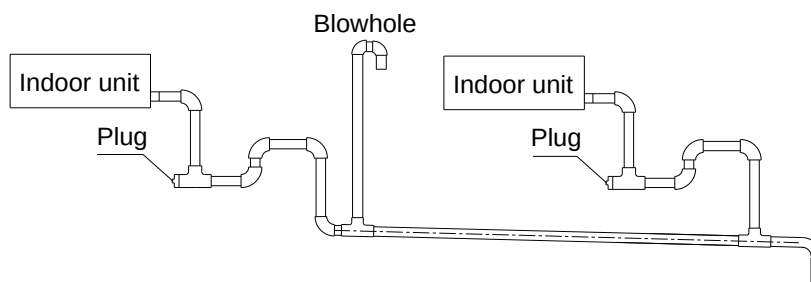
- The length of lifting pipe should not exceed the pump head of indoor unit water pump.
Pump head of big four way cassette: 750mm
Pump head of compact four way cassette: 500mm
- The drainage pipe should be set down inclined after the lifting pipe immediately to avoid wrong operation of water level switch.
- Refer the following picture for installation reference.



6.2.8 Blowhole setting

- For the concentrated drainage pipe system, there should design a blowhole at the highest point of main pipe to ensure the condensate water discharge smoothly.
- The air outlet shall face down to prevent dirt entering pipe.

- Each indoor unit of the system should be installed it.
- The installation should be considering the convenience for future cleaning.



6.2.9 The end of drainage pipe shall not contact with ground directly.

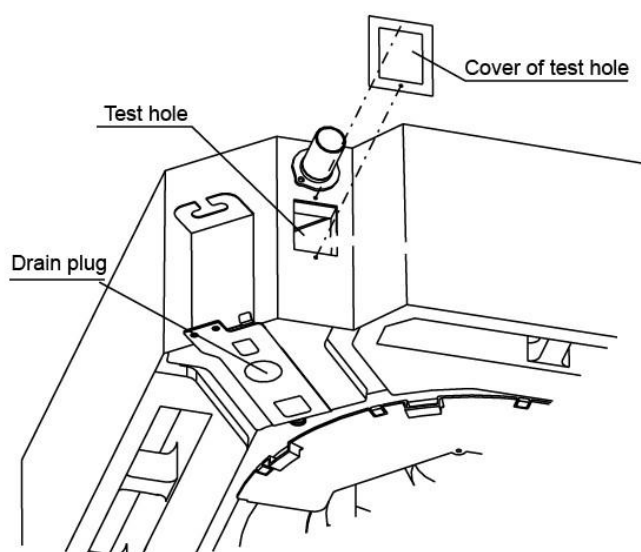
6.3 Drainage test

6.3.1 Water leakage test

After finishing the construction of drainage pipe system, fill the pipe with water and keep it for 24 hours to check whether there is leakage at joint section.

6.3.2 Water discharge test

1. Natural drainage mode(the indoor unit with outdoor drainage pump)
Infuse above 600ml water through water test hole slowly into the water collector, observe whether the water can discharge through the transparent hard pipe at drainage outlet.
2. Pump drainage mode
 - 2.1 Disconnect the plug of water level switch, remove the cover of water test hole and slowly infuse about 2000ml water through the water test hole, be sure that the water will not touch the motor of drainage pump.



- 2.2 Power on and let the air conditioner operate for cooling. Check operation status of drainage pump, and then connect the plug of water level switch, check the operation sound of water pump and observe whether the water can discharge through the transparent hard pipe at drainage outlet. (In light of the length of drainage pipe, water shall be discharged about 1 minute delayed)
- 2.3 Stop the operation of air conditioner, power off the power supply and put the cover of water test hole back to the original place.
 - a. After stopped the air conditioner 3 minutes, check whether there is anything abnormal. If drainage pipes have not been distributed properly, over back-flow water shall cause the flashing of alarm indicator at remote-controlled receiving board and even water shall run over the water collector.
 - b. Continuously infusing water until water level alarmed, check whether the drainage pump could discharge water at once. If water level does not decline under warning water level 3 minutes later, it

shall cause shutdown of unit. When this situation happens, the normal startup only can be recovered by turning down power supply and eliminating accumulated water.

Note: Drain plug at the main water-containing plate is used for eliminating accumulated water in water-containing plate when maintaining air conditioner fault. During normal operation, the plug shall be filled in to prevent leakage.

6.4 Insulation work of drainage pipe

Refer the introduction to the insulation engineering parts.

7. Vacuum Drying and Leakage Checking

7.1 Purpose of vacuum drying

- Eliminating moisture in system to prevent the phenomena of ice-blockage and copper oxidation. Ice-blockage shall cause abnormal operation of system, while copper oxide shall damage compressor.
- Eliminating the non-condensable gas (air) in system to prevent the components oxidizing, pressure fluctuation and bad heat exchange during the operation of system.

7.2 Selection of vacuum pump

- The ultimate vacuum degree of vacuum pump shall be -756mmHg or above.
- Precision of vacuum pump shall reach 0.02mmHg or above.

7.3 Operation procedure for vacuum drying

Due to different construction environment, two kinds of vacuum drying ways could be chosen, namely ordinary vacuum drying and special vacuum drying.

7.3.1 Ordinary vacuum drying

1. When conduct first vacuum drying, connect pressure gauge to the infusing mouth of gas pipe and liquid pipe, and keep vacuum pump running for 1hour (vacuum degree of vacuum pump shall be reached -755mmHg).
2. If the vacuum degree of vacuum pump could not reach -755mmHg after 1 hour of drying, it indicates that there is moisture or leakage in pipeline system and need to go on with drying for half an hour.
3. If the vacuum degree of vacuum pump still could not reach -755mmHg after 1.5 hours of drying, check whether there is leakage source.
4. Leakage test: After the vacuum degree reaches -755mmHg, stop vacuum drying and keep the pressure for 1 hour. If the indicator of vacuum gauge does not go up, it is qualified. If going up, it indicates that there is moisture or leak source.

7.3.2 Special vacuum drying

The special vacuum drying method shall be adopted when:

1. Finding moisture during flushing refrigerant pipe.
2. Conducting construction on rainy day, because rain water might penetrated into pipeline.
3. Construction period is long, and rain water might penetrated into pipeline.
4. Rain water might penetrate into pipeline during construction.

Procedures of special vacuum drying are as follows:

1. Vacuum drying for 1 hour.
2. Vacuum damage, filling nitrogen to reach 0.5Kgf/cm² .
Because nitrogen is dry gas, vacuum damage could achieve the effect of vacuum drying, but this method could not achieve drying thoroughly when there is too much moisture. Therefore, special attention shall be drawn to prevent the entering of water and the formation of condensate water.
3. Vacuum drying again for half an hour.
If the pressure reached -755mmHg, start to pressure leakage test. If it cannot reached the value, repeat vacuum damage and vacuum drying again for 1 hour.

- 4 Leakage test: After the vacuum degree reaches -755mmHg, stop vacuum drying and keep the pressure for 1 hour. If the indicator of vacuum gauge does not go up, it is qualified. If going up, it indicates that there is moisture or leak source.

8. Additional refrigerant charge

- After the vacuum drying process is carried out, the additional refrigerant charge process need to be performed.
- The outdoor unit is factory charged with refrigerant. The additional refrigerant charge volume is decided by the diameter and length of the liquid pipe between indoor and outdoor unit. Refer the following formula to calculate the charge volume.

Diameter of liquid pipe (mm)	Φ6.35	Φ9.52
Formula	$V=15g/m \times (L-5)$	$V=30g/m \times (L-5)$

V: Additional refrigerant charge volume (g).

L : The length of the liquid pipe (m).

Note:

- Refrigerant may only be charged after performed the vacuum drying process.
- Always use gloves and glasses to protect your hands and eyes during the charge work.
- Use electronic scale or fluid infusion apparatus to weight refrigerant to be recharged. Be sure to avoid extra refrigerant charged, it may cause liquid hammer of the compressor or protections.
- Use supplementing flexible pipe to connect refrigerant cylinder, pressure gauge and outdoor unit. And The refrigerant should be charged in liquid state. Before recharging, The air in the flexible pipe and manifold gauge should be exhausted.
- After finished refrigerant recharge process, check whether there is refrigerant leakage at the connection joint part.(Using gas leakage detector or soap water to detect).

9. Engineering of insulation

9.1 Insulation of refrigerant pipe

9.1.1 Operational procedure of refrigerant pipe insulation

Cut the suitable pipe → insulation (except joint section) → flare the pipe → piping layout and connection → vacuum drying → insulate the joint parts

9.1.2 Purpose of refrigerant pipe insulation

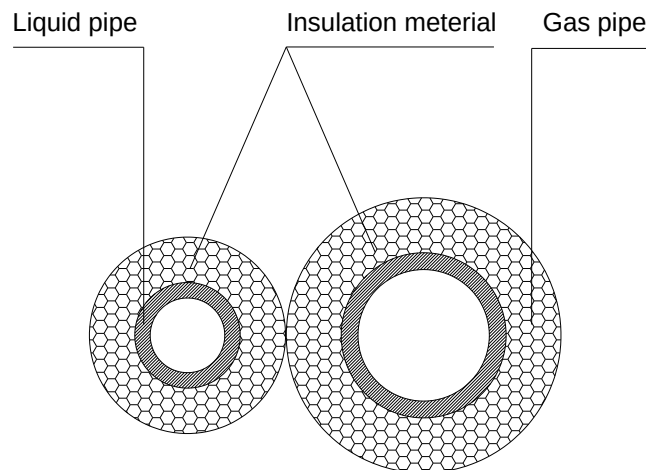
- During operation, temperature of gas pipe and liquid pipe shall be over-heating or over-cooling extremely. Therefore, it is necessary to carry out insulation; otherwise it shall debase the performance of unit and burn compressor.
- Gas pipe temperature is very low during cooling. If insulation is not enough, it shall form dew and cause leakage.
- Temperature of gas pipe is very high (generally 50-100℃) during heating. Insulation work must be carried out to prevent hurt by carelessness touching.

9.1.3 Insulation material selection for refrigerant pipe

- The burning performance should over 120℃
- According to the local law to choose insulation materials
- The thickness of insulation layer shall be above 10mm.If in hot or wet environment place, the layer of insulation should be thicker accordingly.

9.1.4 Installation highlights of insulation construction

- Gas pipe and liquid pipe shall be insulated separately, if the gas pipe and liquid pipe were insulated together; it will decrease the performance of air conditioner.



- The insulation material at the joint pipe shall be 5~10cm longer than the gap of the insulation material.
- The insulation material at the joint pipe shall be inserted into the gap of the insulation material.
- The insulation material at the joint pipe shall be banded to the gap pipe and liquid pipe tightly.
- The linking part should be use glue to paste together
- Be sure not bind the insulation material over-tight, it may extrude out the air in the material to cause bad insulation and cause easy aging of the material.

9.2 Insulation of drainage pipe

9.2.1 Operational procedure of refrigerant pipe insulation

Select the suitable pipe → insulation (except joint section) → piping layout and connection → drainage test → insulate the joint parts

9.2.2 Purpose of drainage pipe insulation

The temperature of condensate drainage water is very low. If insulation is not enough, it shall form dew and cause leakage to damage the house decoration.

Insulation material selection for drainage pipe

- The insulation material should be flame retardant material, the flame retardancy of the material should be selected according to the local law.
- Thickness of insulation layer is usually above 10mm.
- Use specific glue to paste the seam of insulation material, and then bind with adhesive tape. The width of tape shall not be less than 5cm. Make sure it is firm and avoid dew.

9.2.3 Installation and highlights of insulation construction

- The single pipe should be insulated before connecting to another pipe, the joint part should be insulated after the drainage test.
- There should be no insulation gap between the insulation material.

10. Engineering of electrical wiring

10.1 Highlights of electrical wiring installation

- All field wiring construction should be finished by qualified electrician.
- Air conditioning equipment should be grounded according to the local electrical regulations.
- Current leakage protection switch should be installed.
- Do not connect the power wire to the terminal of signal wire.
- When power wire is parallel with signal wire, put wires to their own wire tube and remain at least 300mm gap.
- According to table in indoor part named "the specification of the power" to choose the wiring, make sure the selected wiring not small than the date showing in the table.

- Select different colors for different wire according to relevant regulations.
- Do not use metal wire tube at the place with acid or alkali corrosion, adopt plastic wire tube to replace it.
- There must be not wire connect joint in the wire tube If joint is a must, set a connection box at the place.
- The wiring with different voltage should not be in one wire tube.
- Ensure that the color of the wires of outdoor and the terminal No. are same as those of indoor unit respectively.

11. Test operation

11.1 The test operation must be carried out after the entire installation has been completed.

11.2 Please confirm the following points before the test operation.

- The indoor unit and outdoor unit are installed properly.
- Tubing and wiring are correctly completed.
- The refrigerant pipe system is leakage-checked.
- The drainage is unimpeded.
- The ground wiring is connected correctly.
- The length of the tubing and the added stow capacity of the refrigerant have been recorded.
- The power voltage fits the rated voltage of the air conditioner.
- There is no obstacle at the outlet and inlet of the outdoor and indoor units.
- The gas-side and liquid-side stop valves are both opened.
- The air conditioner is pre-heated by turning on the power.

11.3 Test operation

Set the air conditioner under the mode of "COOLING" by remote controller, and check the following points.

Indoor unit

- Whether the switch on the remote controller works well.
- Whether the buttons on the remote controller works well.
- Whether the air flow louver moves normally.
- Whether the room temperature is adjusted well.
- Whether the indicator lights normally.
- Whether the temporary buttons works well.
- Whether the drainage is normal.
- Whether there is vibration or abnormal noise during operation.

Outdoor unit

- Whether there is vibration or abnormal noise during operation.
- Whether the generated wind, noise, or condensed of by the air conditioner have influenced your neighborhood.
- Whether any of the refrigerant is leaked.

Part 5

Electrical Control System

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1. Electrical Control Function

1.1 Definition

T1: Room Air Thermistor (RAT)

T2: Indoor Coil Thermistor (ICT)

T2B: Indoor Return Gas Thermistor (RGT)

T3: Outdoor Coil Thermistor (OCT)

T4: Outdoor Air Thermistor (OAT)

T5: Compressor Discharge Thermistor (CTT)

1.2 Main Protection

1.2.1 Time delay at restart for compressor.

1.2.2 Temperature protection of compressor top

The unit will stop working when the compressor top temp. protector cut off, and will restart after the compressor top temp. protector restart.

1.2.3 Temperature protection of compressor discharge

For 12K units:

When the compressor discharge temp. is getting higher, the running frequency will be limited as below rules:

---Compressor discharge temp. $T5 > 115^{\circ}\text{C}$ for 5s, compressor stops and restarts up till $T5 < 90^{\circ}\text{C}$

--- $110 < T5 < 115^{\circ}\text{C}$, decrease the frequency to the lower level every 2 minutes.

--- $105 < T5 < 110^{\circ}\text{C}$, keep running at the current frequency.

---- $T5 < 105^{\circ}\text{C}$, no limit for frequency.

For other units:

When the compressor discharge temp. is getting higher, the running frequency will be limited as below rules:

----If $102^{\circ}\text{C} < T5 < 115^{\circ}\text{C}$, decrease the frequency to the lower level every 2 minutes till to F1.

---If $T5 > 115^{\circ}\text{C}$ for 10 seconds, the compressor will stop and restart till $T5 < 90^{\circ}\text{C}$.

1.2.4 Sensor protection at open circuit and breaking disconnection.

1.2.5 Indoor fan delayed open function

When the unit starts up, the louver will be active immediately and the indoor fan will open 10s later.

If the unit runs in heating mode, the indoor fan will be also controlled by anti-cold wind function.

1.2.6 Fan Speed is out of control

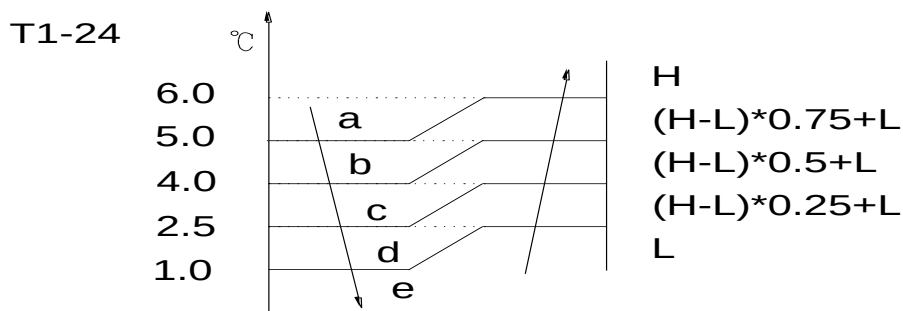
For super slim cassette: When indoor fan speed keeps too low (lower than 200RPM) for 50s, the unit will stop and the LED will display the failure.

For other models: When indoor fan speed keeps too low (lower than 300RPM) for 50s, the indoor fan will shut off and restart 30s later, if protection happened 3 times when fan motor restart continuously, the unit will stop and the LED will display the failure.

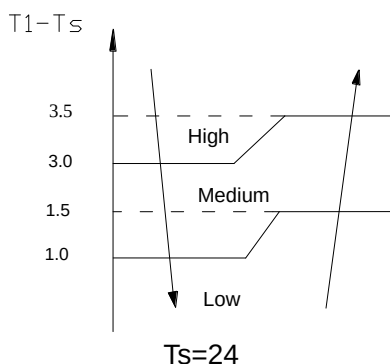
1.3 Operation Modes and Functions

1.3.1 Fan mode

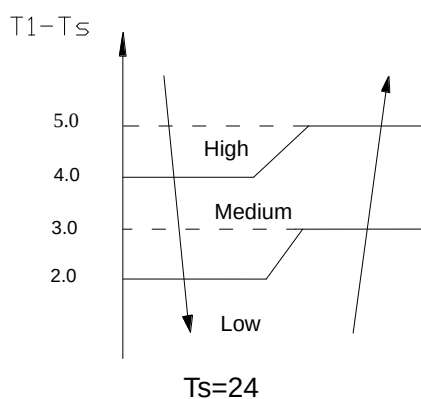
- (1) Outdoor fan and compressor stop.
- (2) Temperature setting function is disabled, and no setting temperature is displayed.
- (3) For Console& Compact cassette(12K): Indoor fan can be set to high/med/low/ breeze, for other models: Indoor fan can be set to high/(med)/low/auto;
- (4) The louver operates same as in cooling mode.
- (5) Auto fan:
For Console:



For Compact cassette(12K)、A5(12K)



For other models:

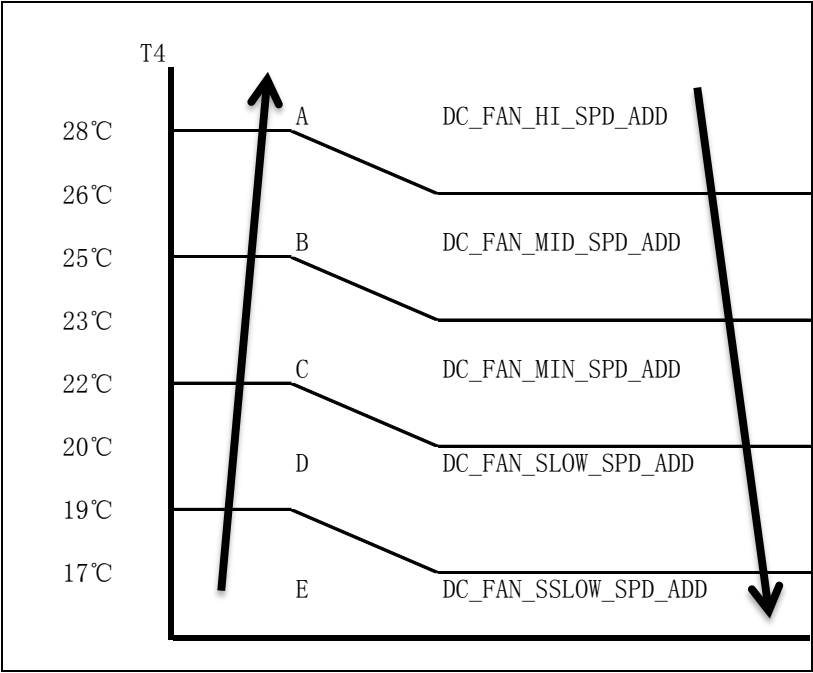


1.3.2 Cooling Mode

1.3.2.1 Outdoor PMW open angle control

The unit is working in cooling mode with the EXV open 300P(For 12K, it is 220P) for 3 minutes, then adjusting PMW open angle according to the temperature of compressor discharge every 2 minutes.

1.3.2.2 Outdoor fan running rules

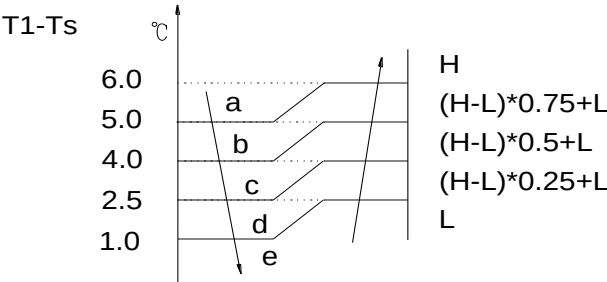


1.3.2.3 Indoor fan running rules

For Console(12K):
In cooling mode, indoor fan runs all the time and the speed can be selected as high, medium, low, auto and silent. When the compressor is running, the indoor fan is controlled as below:

Setting Fan speed	T1-Ts		Actual fan speed
H	4.5		$H+(H+=H+G)$
	3.0		$H (=H)$
	1.5		$H- (H-=H-G)$
M	4.5		$M+(M+=M+Z)$
	3.0		$M(M=M)$
	1.5		$M-(M-=M-Z)$
L	4.5		$L+(L+=L+D)$
	3.0		$L(L=L)$
	1.5		$L-(L-=L-D)$

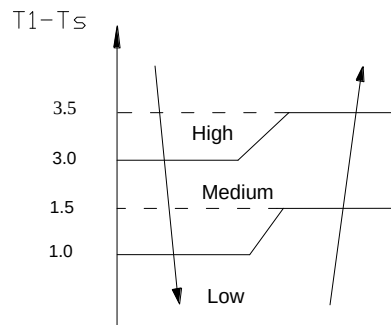
The auto fan acts as below rules:



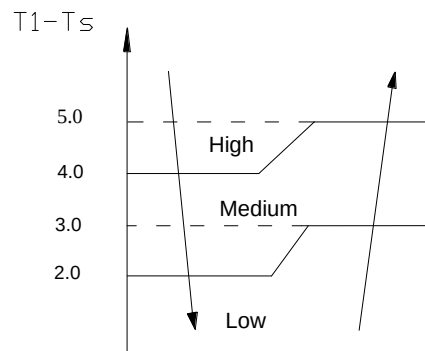
For Compact cassette(12K)、A5(12K)

In cooling mode, indoor fan runs all the time and the speed can be selected as high, medium, low, auto and silent.

The auto fan:



For other models:



1.3.2.4 Evaporator low temperature T_2 protection.

For 12K models:

--- $T_2 < 0^\circ\text{C}$, the compressor will stop and restart when $T_2 \geq 5^\circ\text{C}$.

--- $0^\circ\text{C} \leq T_2 < 4^\circ\text{C}$, the compressor frequency will be limited and decreased to the lower level

--- $4^\circ\text{C} \leq T_2 < 7^\circ\text{C}$, the compressor will keep the current frequency.

--- $T_2 > 7^\circ\text{C}$, the compressor frequency will not be limited.

For other models: When $T_2 < 2^\circ\text{C}$ and lasts for 3 minutes, the indoor has no capacity demand and resume till $T_2 \geq 7^\circ\text{C}$.

1.3.2.5 Condenser high temperature T_3 protection

For 12K models :

--- $55^\circ\text{C} < T_3 < 60^\circ\text{C}$, the compressor frequency will decrease to the lower level until to F1 and then runs at F1. If $T_3 < 55^\circ\text{C}$, the compressor will keep running at the current frequency.

--- $T_3 < 52^\circ\text{C}$, the compressor will not limit the frequency and resume to the former frequency.

--- $T_3 > 60^\circ\text{C}$ for 5 seconds, the compressor will stop until $T_3 < 52^\circ\text{C}$.

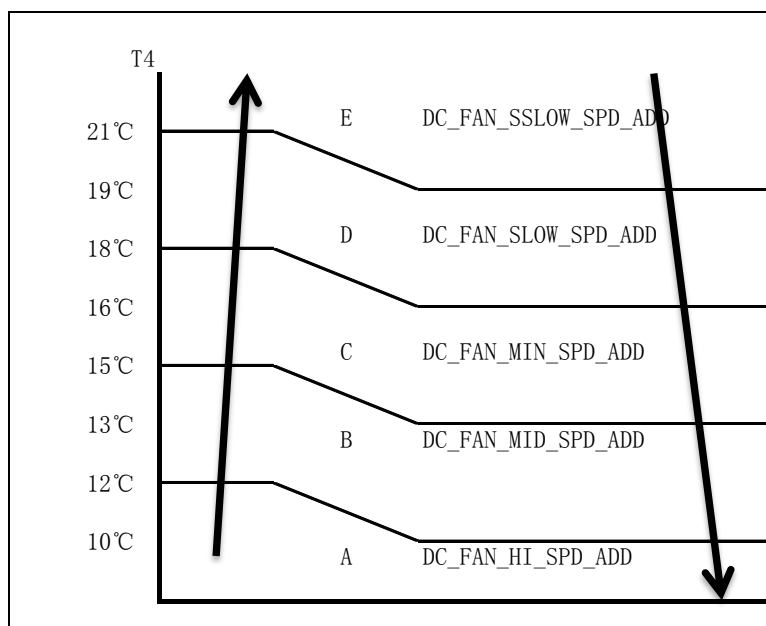
For other models: When $T_3 \geq 65^\circ\text{C}$ for 3 seconds, the compressor will shut off. When $T_3 < 52^\circ\text{C}$, the compressor will restart.

1.3.3 Heating Mode

1.3.2.1 Outdoor PMW open angle control

The unit is working in heating mode with the EXV open 300P(For 12K,it is 480P) for 3 minutes, then adjusting PMW open angle according to the temperature of compressor discharge every 2 minutes.

1.3.3.2 Outdoor fan running rules:



1.3.3.3 Indoor fan running rules:

For Console(12K):

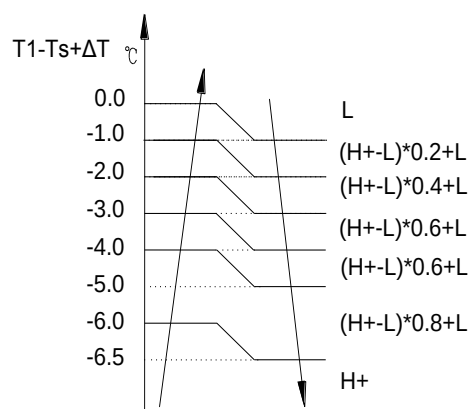
In heating mode, indoor fan can be selected as high, medium, low, auto and silent. The anti-cold- wind function has the priority.

When the compressor is running, the indoor fan is controlled as below:

Setting fan speed	T1-Ts		Actual fan speed
H	-1.5	↑	H- (H=H-G)
	-3.0	→	H (=H)
	-4.5	↓	H+(H+=H+G)
M	-1.5	↑	M-(M-=M-Z)
	-3.0	→	M (M=M)
	-4.5	↓	M+(M+=M+Z)
L	-1.5	↑	L-(L-=L-D)
	-3.0	→	L(L=L)
	-4.5	↓	L+(L+=L+D)

If the compressor stops caused by the room temperature rising, the indoor fan will be forced to run 127 seconds with breeze. During this period, the anti-cold-wind is disabled.

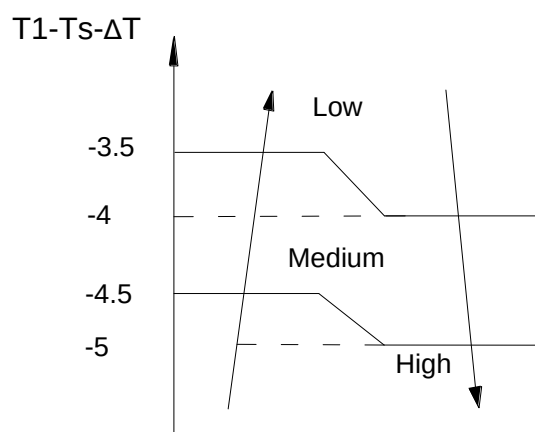
Auto fan action in heating mode:



For Compact cassette(12K)、A5(12K):

When the compressor is on, the indoor fan can be set to high, medium, low, auto and silent. And the anti-cold wind function has the priority.

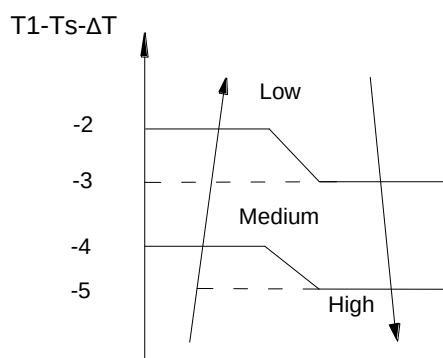
Auto fan action:



For other models:

When the compressor is on, the indoor fan can be set to high/medium/low/auto. And the anti-cold wind function has the priority.

Auto fan action:



1.3.3.4 Defrosting mode:

For 12K models:

Condition of defrosting:

If any one of the following items is satisfied, AC will enter the defrosting mode.

After the compressor starts up and keeps running, mark the minimum value of T3 from the 10th minutes to 15th minutes as T30.

- 1) If the compressor cumulate running time is up to 29 minutes and $T3 < TCDI1$, $T3 + T30SUBT3ONE \leq T30$.
- 2) If the compressor cumulate running time is up to 35 minutes and $T3 < TCDI2$, $T3 + T30SUBT3TWO \leq T30$.
- 3) If the compressor cumulate running time is up to 29 minutes and $T3 < TCDI3$ for 3 minutes.
- 4) If the compressor cumulate running time is up to 120 minutes and $T3 < -15^{\circ}\text{C}$.

Condition of ending defrosting:

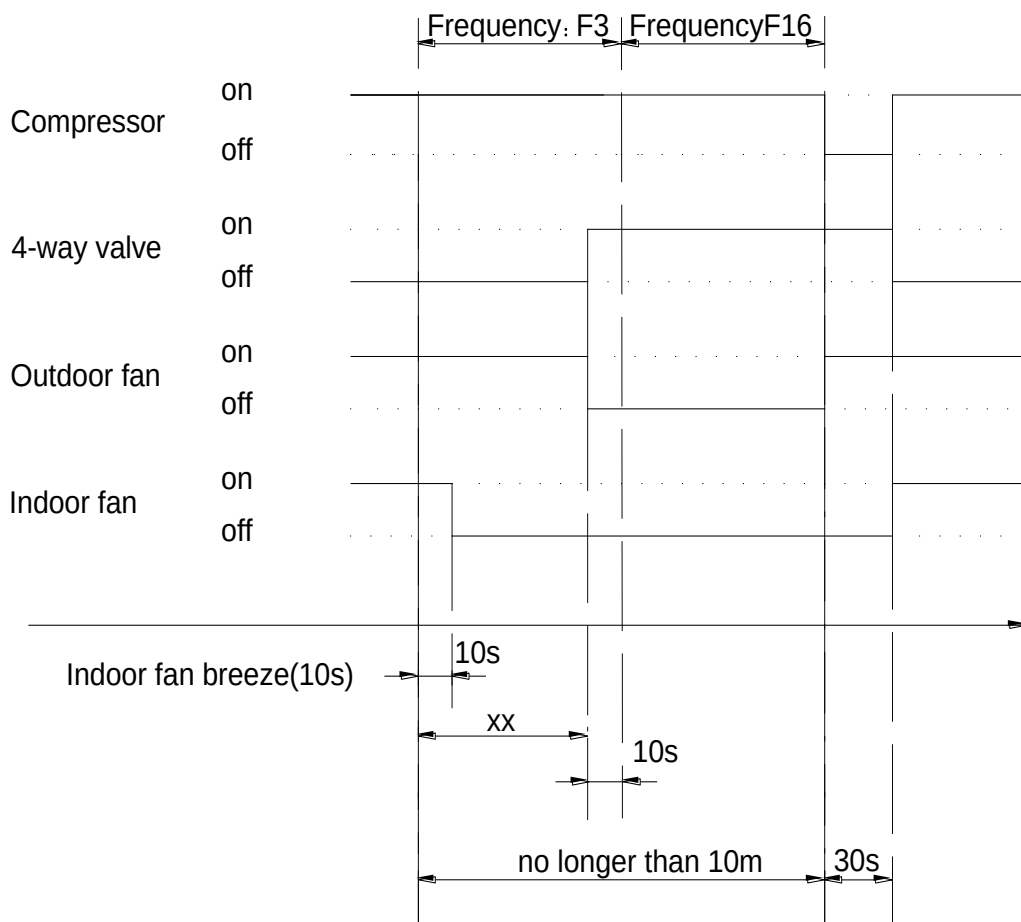
If any one of the following items is satisfied, the defrosting will finish and the machine will turn to normal heating mode.

----T3 rises to be higher than $TCDE1^{\circ}\text{C}$.

----T3 keeps to be higher than $TCDE2^{\circ}\text{C}$ for 80 seconds.

----The machine has run for 10 minutes in defrosting mode.

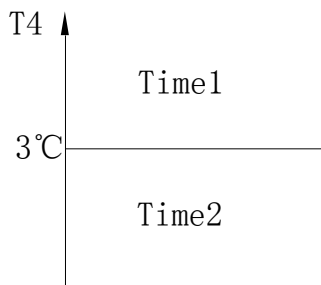
Defrosting action:



xx=90

The other models:

Condition of defrosting:



Time conditions:

time1

Time conditions(Meet the following conditions)

1. Running in heating mode
2. $T4 \geq 3^{\circ}\text{C}$
3. Compressor is on
4. $T3 \leq \text{TempEnterDefrost_ADD } ^{\circ}\text{C}$

Cleared conditions (Meet any one of the following conditions)

1. Compressor is off.
2. $T3 > \text{TempEnterDefrost_ADD } ^{\circ}\text{C}$

Time2

Time conditions(Meet the following conditions)

1. Running in heating mode
2. $T4 < 3^{\circ}\text{C}$
3. Compressor is on
4. $T3 \leq \text{TempEnterDefrost_ADD } ^{\circ}\text{C}$

Cleared conditions (Meet any one of the following conditions)

1. Compressor is off and $T3 > \text{TempEnterDefrost_ADD} + 2^{\circ}\text{C}$ last for 20 minutes
2. Running in cooling mode.
3. Compressor is off for 1 hour.

Condition of entry defrosting:

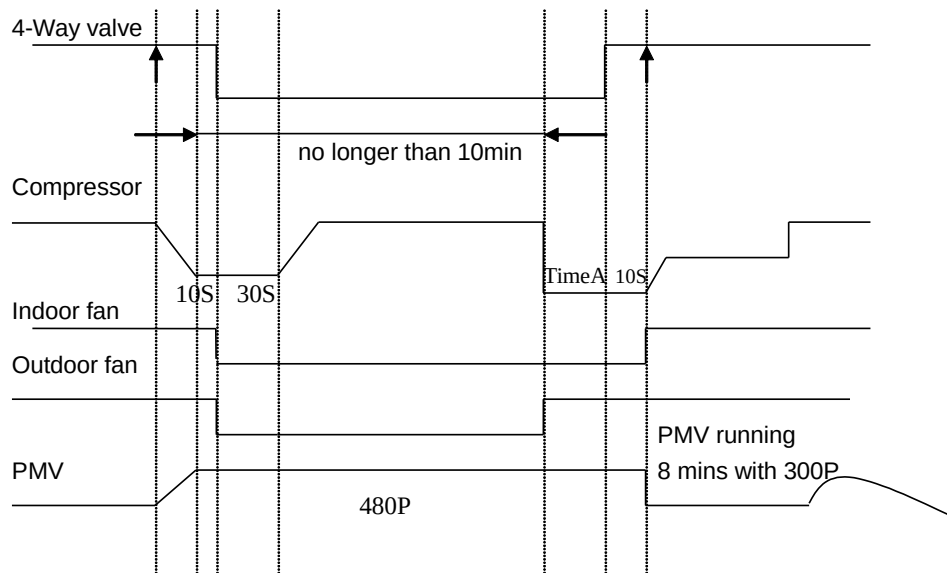
$\text{time1} + \text{time2} \geq 40$ minutes, When defrosting is end, time1 and time2 are cleared.

Condition of ending defrosting:

If any one of following items is satisfied, defrosting will stop and the machine will turn to normal heating mode.

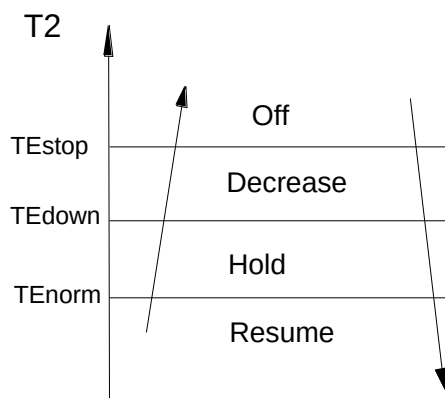
- ① The defrosting time achieves 10min;
- ② $T3 \geq \text{TempQuitDefrost_ADD } ^{\circ}\text{C}$;
- ③ $T3 \geq 7^{\circ}\text{C}$ for 60seconds.

Defrosting action :



1.3.3.5 High evaporator coil temp.T2 protection:

For 12K models:



Off: Compressor stops.

Decrease: Decrease the running frequency to the lower level.

Hold: Keep the current frequency.

Resume: No limitation for frequency.

For other models: $T_2 > 60^\circ\text{C}$, the compressor will stop and restart when $T_2 \leq 54^\circ\text{C}$.

1.3.4 Auto-mode

This mode can be chosen with remote controller and the setting temperature can be changed between $17\sim 30^\circ\text{C}$.

In auto mode, the machine will choose cooling, heating or fan-only mode according to ΔT ($\Delta T = T_1 - T_s$).

For 12K models:

$\Delta T = T_1 - T_s$	Running mode
$\Delta T > 1^\circ\text{C}$	Cooling
$-1 < \Delta T \leq 1^\circ\text{C}$	Fan-only

$\Delta T \leq -1^{\circ}\text{C}$	Heating
------------------------------------	---------

For other models:

$\Delta T = T_1 - T_s$	Running mode
$\Delta T \geq 2^{\circ}\text{C}$	Cooling
$-1 \leq \Delta T < 2^{\circ}\text{C}$	Fan-only
$\Delta T < -1^{\circ}\text{C}$	Heating

Indoor fan will run at auto fan of the relevant mode.

The louver operates same as in relevant mode.

If the machine switches mode between heating and cooling, the compressor will keep stopping for 15 minutes and then choose mode according to $T_1 - T_s$.

If the setting temperature is modified, the machine will choose running function again.

1.3.5 Drying mode

For 12K models:

Indoor fan speed is fixed at breeze and can't be changed. The louver angle is the same as in cooling mode.

Low indoor room temperature protection

In drying mode, if room temperature is lower than 10°C , the compressor will stop and not resume until room temperature exceeds 12°C .

All protections are active and the same as that in cooling mode.

For other models: Drying mode works the same as cooling mode in low speed.

All protections are active and the same as that in cooling mode.

1.3.6 Timer function

1.3.6.1 Timing range is 24 hours.

1.3.6.2 Timer on. The machine will turn on automatically when reaching the setting time.

1.3.6.3 Timer off. The machine will turn off automatically when reaching the setting time.

1.3.6.4 Timer on/off. The machine will turn on automatically when reaching the setting "on" time, and then turn off automatically when reaching the setting "off" time.

1.3.6.5 Timer off/on. The machine will turn off automatically when reaching the setting "off" time, and then turn on automatically when reaching the setting "on" time.

1.3.6.6 The timer function will not change the AC current operation mode. Suppose AC is off now, it will not start up firstly after setting the "timer off" function. And when reaching the setting time, the timer LED will be off and the AC running mode has not been changed.

1.3.6.7 The setting time is relative time.

1.3.7 Economy function

1.3.7.1 The sleep function is available in cooling, heating or auto mode.

1.3.7.2. Operation process in sleep mode is as follow:

When cooling, the setting temperature rises 1°C (be lower than 30°C) every one hour, 2 hours later the setting temperature stops rising and the indoor fan is fixed at low speed.

When heating, the setting temperature decreases 1°C (be higher than 17°C) every one hour, 2 hours later the setting temperature stops rising and indoor fan is fixed at low speed. (Anti-cold wind function has the priority).

1.3.7.3 Operation time in sleep mode is 7 hours. After 7 hours the AC quits this mode but doesn't turn off, but for console, the unit will turn off.

1.3.7.4 Timer setting is available

1.3.8 Auto-Restart function

The indoor unit is equipped with auto-restart function, which is carried out through an auto-restart module. In case of a sudden power failure, the module memorizes the setting conditions before the power failure. The unit will resume the previous operation setting (not including Swing function) automatically after 3 minutes when power returns.

1.3.9 Drain pump control (For Cassette)

Adopt the water-level switch to control the action of drain pump.

Main action under different condition : (every 5 seconds the system will check the water level one time)

1. When the A/C operates with cooling (including auto cooling) and forced cooling mode, the pump will start running immediately and continuously, till stop cooling.
2. Once the water level increase and up to the control point, LED will alarm and the drain pump open and continue checking the water level. If the water level fall down and LED disarmed (drain pump delay close 1 minute) and operate with the last mode. Otherwise the entire system stop operating (including the pump) and LED remain alarming after 3 minutes.

1.3.10 Follow me

- 1) If the indoor PCB receives the signal which results from pressing the FOLLOW ME button on remote controller, the buzzer will emit a sound and this indicates the follow me function is initiated. But when the indoor PCB receives signal which sent from remote controller every 3 minutes, the buzzer will not respond. When the unit is running with follow-me function, the PCB will control the unit according to the temperature from follow-me signal, and the temperature collection function of room temperature sensor will be shielded.
- 2) When the follow-me function is available, the PCB will not respond according to the setting temperature from follow-me signal every 3 minutes.
- 3) The PCB will take action to the mode change information from remote controller signal, and the follow-me function will be turned off. (if the wired remote controller does not initiate follow me function).
- 4) When the unit is running with follow-me function, if the PCB doesn't receive any signal from remote controller for 7 minutes or pressing FOLLOW ME button again, the follow-me function will be turned off

automatically, and the temperature collection function of room temperature sensor will be available, the PCB will control the unit according to the room temperature detected from its own room temperature sensor and setting temperature.

- 5) When the indoor PCB receives the follow-me signal from wired remote controller, the control is the same as that from wireless remote controller, but buzzer will not respond. When the PCB receives turning-off follow-me signal from wired remote controller, the unit will quit follow-me function at once. The follow-me function controlled by wired remote controller prevails that by wireless remote controller.

1.3.11 Point Check Function(Excluding 12K)

There is a check switch in outdoor PCB.

Press the switch SW1 to check the states of unit when the unit is running.

Press the switch N times it will display the content corresponding to No. N. After getting into the check function, it will display No. N with 1.5s, meanwhile the low bit decimal of digit display flashing, indicated to get into the check function display. After 1.5s, it will display the content corresponding to No. N.

the digital display tube will display the follow procedure when push SW1 each time.

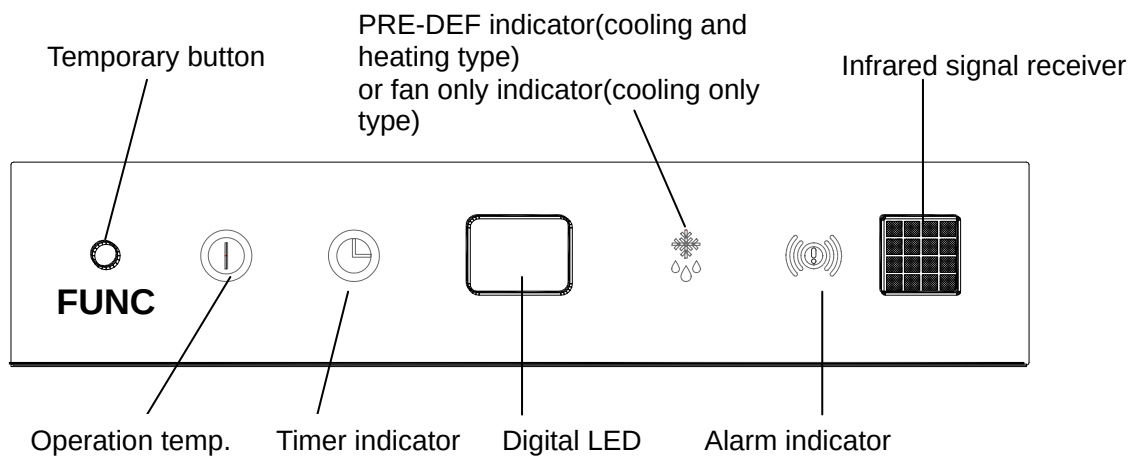
The digital display tube will display the follow procedure when push SW1 each time.				
N	Display	Remark		
00	Normal display	Display running frequency, running state or malfunction code		
01	Indoor unit capacity demand code	Actual data*HP*10 If capacity demand code is higher than 99, the digital display tube will show single digit and tens digit. (For example, the digital display tube show "5.0",it means the capacity demand is 15. the digital display tube show "60",it means the capacity demand is 6.0)		
02	Amendatory capacity demand code			
03	The frequency after the capacity requirement transfer			
04	The frequency after the frequency limit			
05	The frequency of sending to 341			
06	Indoor unit evaporator outlet temp.(heating T2, cooling T2B)	If the temp. is lower than 0 degree, the digital display tube will show "0".If the temp. is higher than 70 degree, the digital display tube will show "70".		
07	Condenser pipe temp.(T3)	If the temp. is lower than -9 degree, the digital display tube will show "-9".If the temp. is higher than 70 degree, the digital display tube will show "70". If the indoor unit is not connected, the digital display tube will show: "——"		
08	Outdoor ambient temp.(T4)			
09	Compressor discharge temp.(T5)	The display value is between 13~129 degree. If the temp. is lower than 13 degree, the digital display tube will show "13".If the temp. is higher than 99 degree, the digital display tube will show single digit and tens digit. (For example, the digital display tube show "0.5",it means the compressor discharge temp. is 105 degree. the digital display tube show "1.6",it means the compressor discharge temp. is 116 degree)		
10	AD value of current	The display value is hex number.		
11	AD value of voltage			
12	Indoor unit running mode code	Off:0, Fan only 1,Cooling:2, Heating:3		
13	Outdoor unit running mode code	Off:0, Fan only 1,Cooling:2, Heating:3, Forced cooling:4		
14	EXV open angle	Actual data/4. If the value is higher than 99, the digital display tube will show single digit and tens digit. For example ,the digital display tube show "2.0",it means the EXV open angle is 120×4=480p.)		
15	Frequency limit symbol	Bit7	Frequency limit caused by IGBT radiator	The display value is hex number. For example, the digital display tube show 2A,then Bit5=1, Bit3=1. Bit1=1.
		Bit6	Frequency limit caused by PFC	

		Bit5	Frequency limit caused by T4.	It means frequency limit caused by T4,T3 and current.
		Bit4	Frequency limit caused by T2.	
		Bit3	Frequency limit caused by T3.	
		Bit2	Frequency limit caused by T5.	
		Bit1	Frequency limit caused by current	
		Bit0	Frequency limit caused by voltage	
16	DC fan motor speed			
17	IGBT radiator temp.	The display value is between 30~120 degree. If the temp. is lower than 30 degree, the digital display tube will show "30".If the temp. is higher than 99 degree, the digital display tube will show single digit and tens digit. (For example, the digital display tube show "0.5",it means the IGBT radiator temp. is 105 degree. the digital display tube show "1.6",it means the IGBT radiator temp. is 116 degree)		
18	Indoor unit number	The indoor unit can communicate with outdoor unit well.		
19	Condenser pipe temp. of 1# indoor unit	If the temp. is lower than 0 degree, the digital display tube will show "0".If the temp. is higher than 70 degree, the digital display tube will show "70". If the capacity demand is 0, , the digital display tube will show "0. If the indoor unit is not connected, the digital display tube will show: "——"(heating T2, cooling T2B)		
20	Condenser pipe temp. of 2# indoor unit			
21	Condenser pipe temp. of 3# indoor unit			
22	1# Indoor unit capacity demand code	Actual data*HP*10 If capacity demand code is higher than 99, the digital display tube will show single digit and tens digit. (For example, the digital display tube show "5.0",it means the capacity demand is 15. the digital display tube show "60",it means the capacity demand is 6.0). If the indoor unit is not connected, the digital display tube will show: "——"		
23	2# Indoor unit capacity demand code			
24	3# Indoor unit capacity demand code			

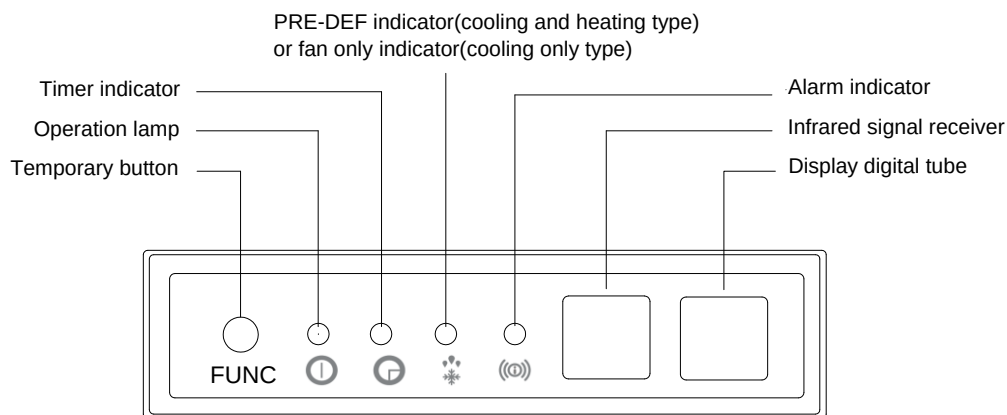
2. Troubleshooting

2.1 Display board

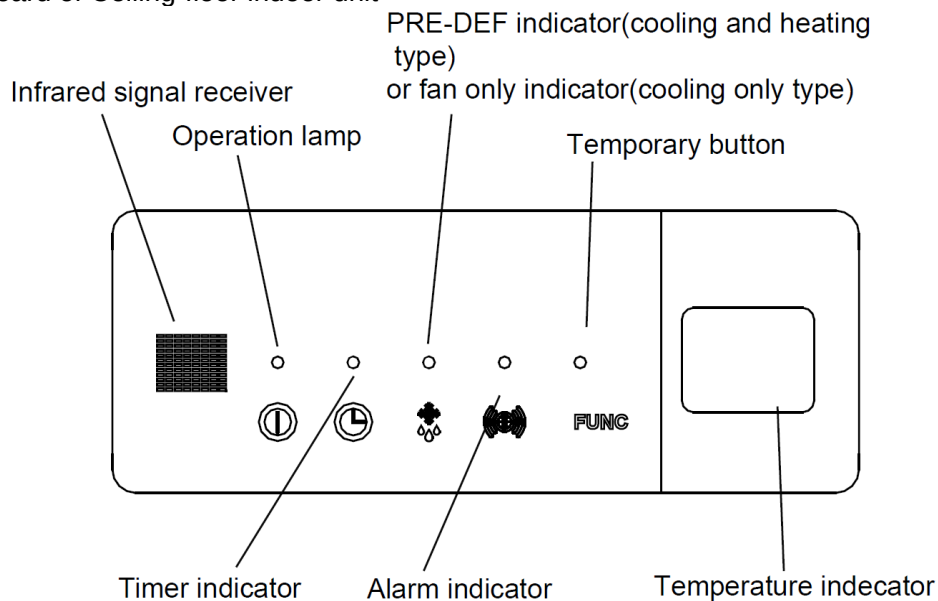
2.1.1 Icon explanation on indoor display board (Super slim cassette).



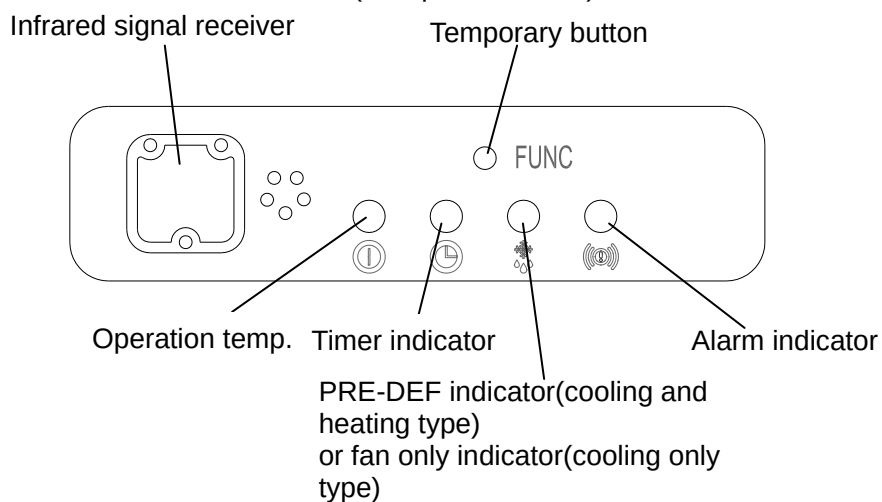
2.1.2 Icon explanation on indoor display board (Duct)



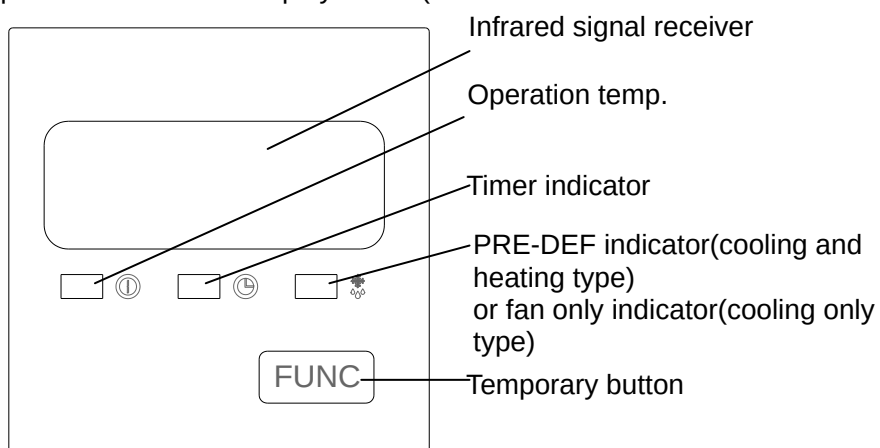
2.1.3 Display board of Ceiling-floor indoor unit



2.1.4 Icon explanation on indoor display board (Compact cassette).



2.1.5 Icon explanation on indoor display board (Console)



2.2 Indoor unit malfunction

For Console(12K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp
1	Refrigerant Leakage Detection	☆	☆	◎
2	Open or short circuit of T1 temperature sensor	☆	X	X
3	Open or short circuit of T2 temperature sensor	X	X	☆
4	Indoor / outdoor units communication error	X	☆	X
5	Outdoor fan speed has been out of control	X	☆	O
6	Indoor EEPROM malfunction	☆	☆	X
7	IPM module protection	☆	X	☆
8	Open or short circuit of T3 or T4 temperature sensor or Outdoor unit EEPROM parameter error	☆	☆	☆
9	Over voltage or over low voltage protection	☆	☆	O
10	Top temperature protection of compressor	☆	O	X
11	Inverter compressor drive protection	☆	◎	X
12	Indoor fan speed has been out of control.	☆	O	☆
O(light) X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)				

For console type(18K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp
1	Indoor EEPROM malfunction	☆	☆	☆
2	Indoor fan Speed has been out of control.	☆	X	☆
3	Open or short circuit of T1 or T2 temperature sensor	☆	☆	X
4	Indoor / outdoor units communication error	X	☆	X
5	Outdoor unit malfunction	X	X	◎
X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)				

For Compact cassette(12K)、A5(12K):

NO.	Malfunction	Defrosting lamp	Alarm lamp	Running lamp	Timer lamp	Display(digital tube)
1	Open or short circuit of T1 temperature sensor	X	X	☆	X	E0
2	Open or short circuit of T2 temperature sensor	☆	X	X	X	E1
3	Indoor / outdoor units communication error	X	X	X	☆	E2
4	Full-water malfunction	X	☆	X	X	E3
5	Indoor EEPROM malfunction	X	X	☆	☆	E4
6	IPM module protection	X	O	☆	X	E5
7	Open or short circuit of T3 or T4 temperature sensor or Outdoor unit EEPROM parameter error	X	X	☆	O	E6
8	Outdoor fan speed has been out of control	☆	X	☆	O	E7
9	Refrigerant Leakage Detection	☆	☆	O	X	EC
10	Over voltage or over low voltage protection	X	O	☆	O	P0

11	Top temperature protection of compressor	O	X	☆	X	P1
12	Outdoor current protection	☆	X	☆	☆	P2
13	Inverter compressor drive error	X	◎	X	X	P4
14	Indoor fan Speed has been out of control.	O	X	☆	O	F5
O (on) X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)						

For other models:

NO.	Malfunction	Defrosting lamp	Alarm lamp	Running lamp	Timer lamp	Display(digital tube)
1	Indoor / outdoor units communication error	X	X	X	☆	E1
2	Open or short circuit of T1 temperature sensor	X	X	☆	X	E2
3	Open or short circuit of T2 temperature sensor	X	X	☆	X	E3
4	Open or short circuit of T2B temperature sensor	X	X	☆	X	E4
5	Indoor EEPROM malfunction	☆	X	X	X	E7
6	Indoor fan speed is out of control	☆	☆	X	X	E8
7	Refrigerant Leakage Detection	☆	☆	O	X	EC
8	Outdoor unit malfunction	X	◎	X	X	Ed
9	Full-water malfunction	X	☆	X	X	EE
10	Communication malfunction between master unit and slave unit	X	☆	X	☆	F3
11	Other malfunction of master unit or slave unit	X	☆	☆	X	F4
O (on) X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz) F0,F1,F2 are only available for super-slim cassette F3,F4 are only available for the unit with TWINS function Note: Digital display is only available for super slim cassette & duct type.						

2.3 Outdoor unit malfunction

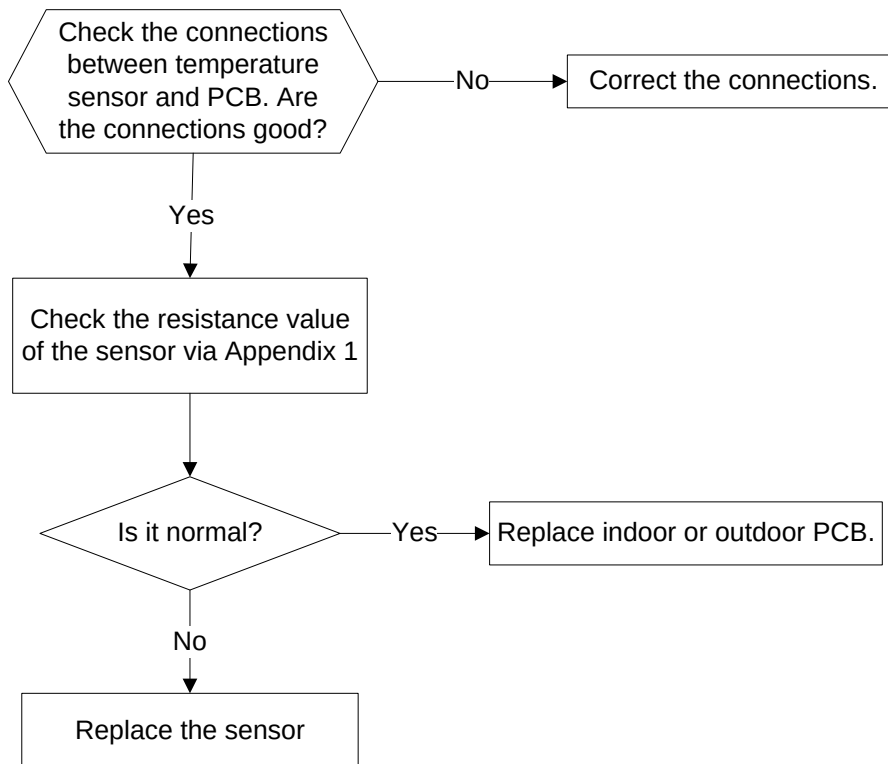
Display	Malfunction or Protection
E0	Outdoor EEPROM malfunction
E2	Indoor / outdoor units communication error
E3	Communication malfunction between IPM board and outdoor main board
E4	Open or short circuit of T3 or T4 temperature sensor
E5	Voltage protection of compressor
E6	PFC module protection (For 36K 1-Phase model)
E8	Outdoor fan speed is out of control
P0	Top temperature protection of compressor
P1	High pressure protection (For 36K~60K models)
P2	Low pressure protection(For 36K~60K models)
P3	Current protection of compressor
P4	Discharge temperature protection of compressor
P5	High temperature protection of condenser
P6	IPM module protection
P7	High temperature protection of evaporator

In low ambient cooling mode, the LED displays “LC” or alternative displays between running frequency and “LC”(each displays 0.5s)

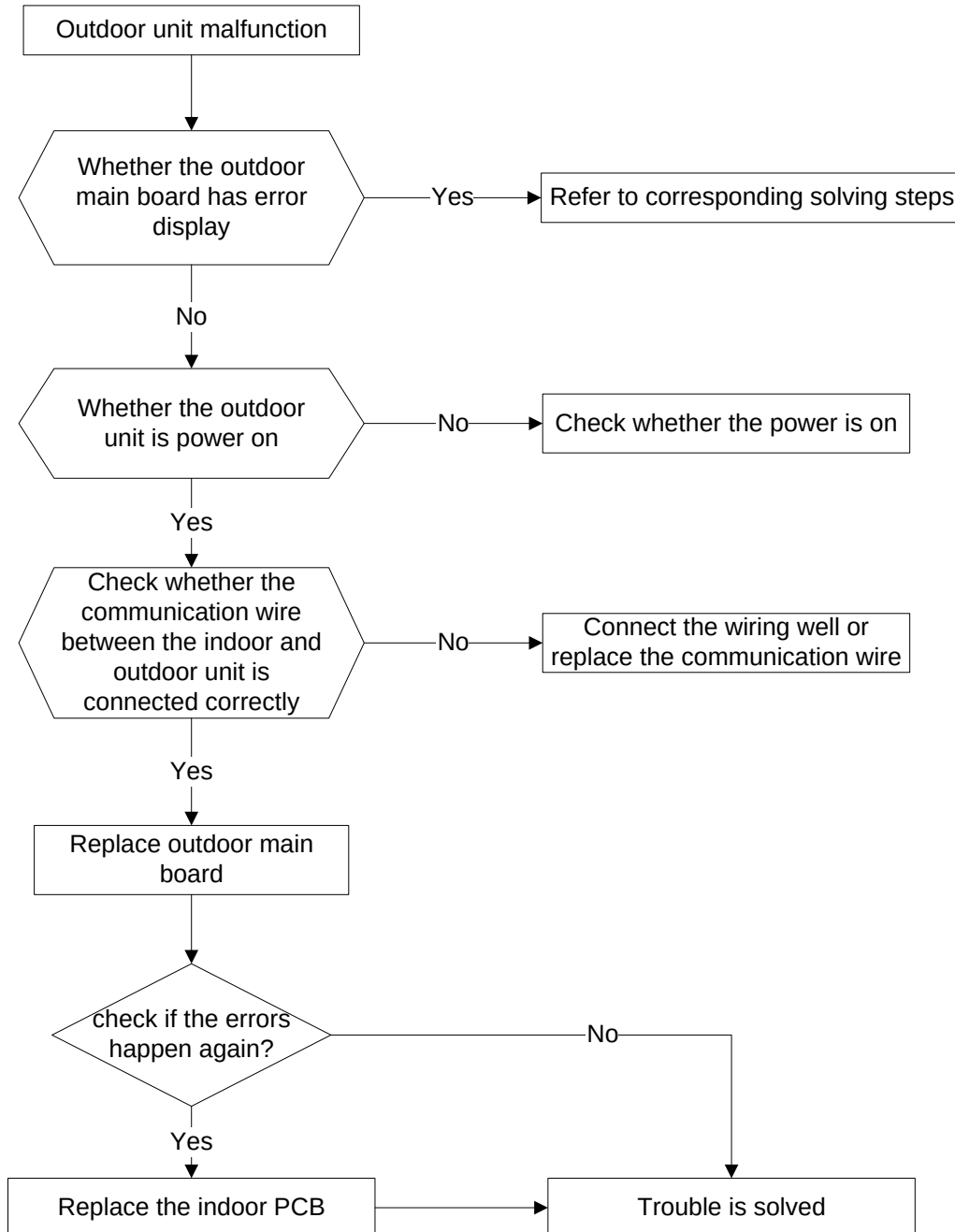
2.4 Solving steps for typical malfunction

2.4.1 For the indoor unit

2.4.1.1 Open or short circuit of temperature sensor

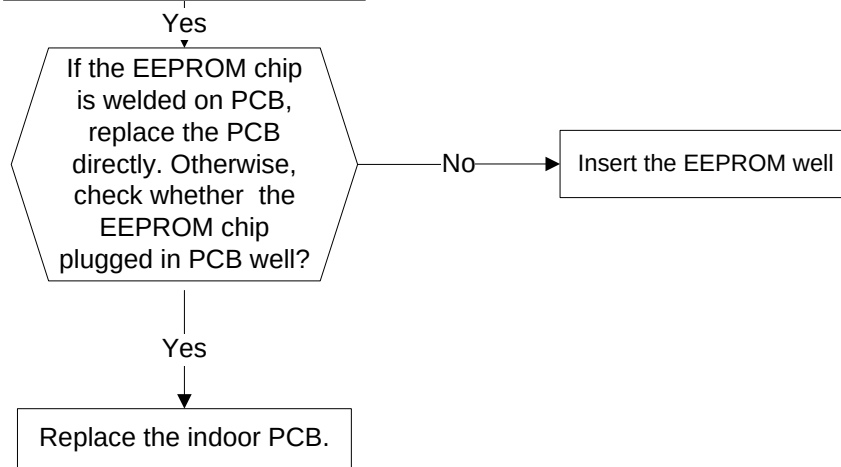


2.4.1.2. Outdoor unit malfunction

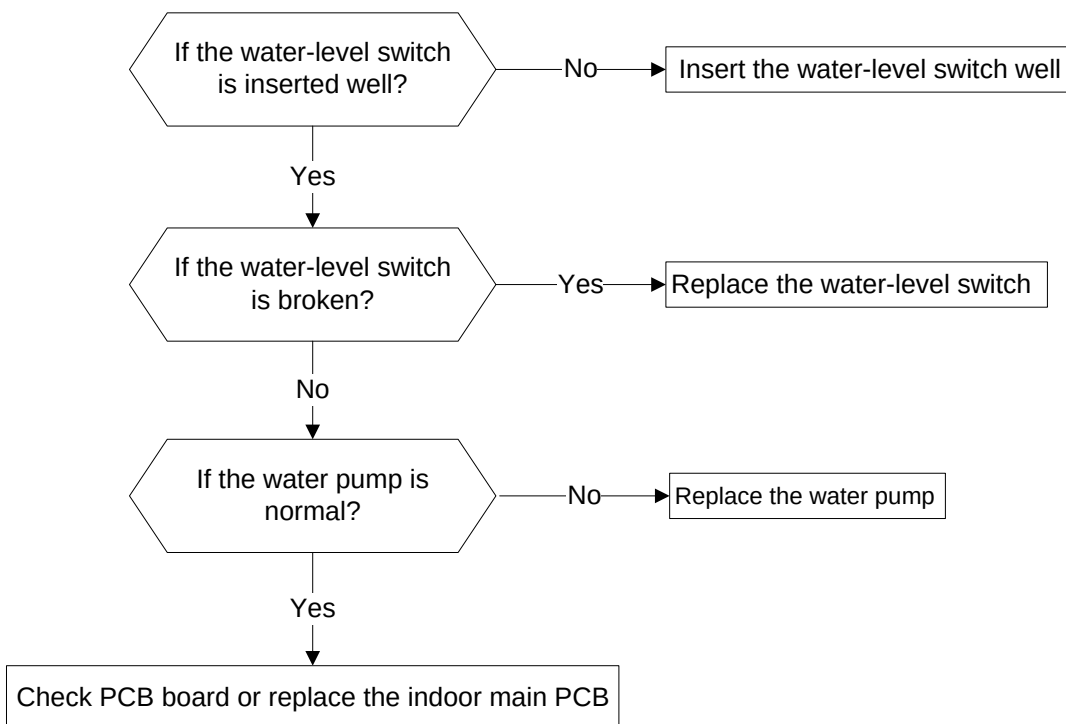


2.4.1.3. Indoor EEPROM malfunction

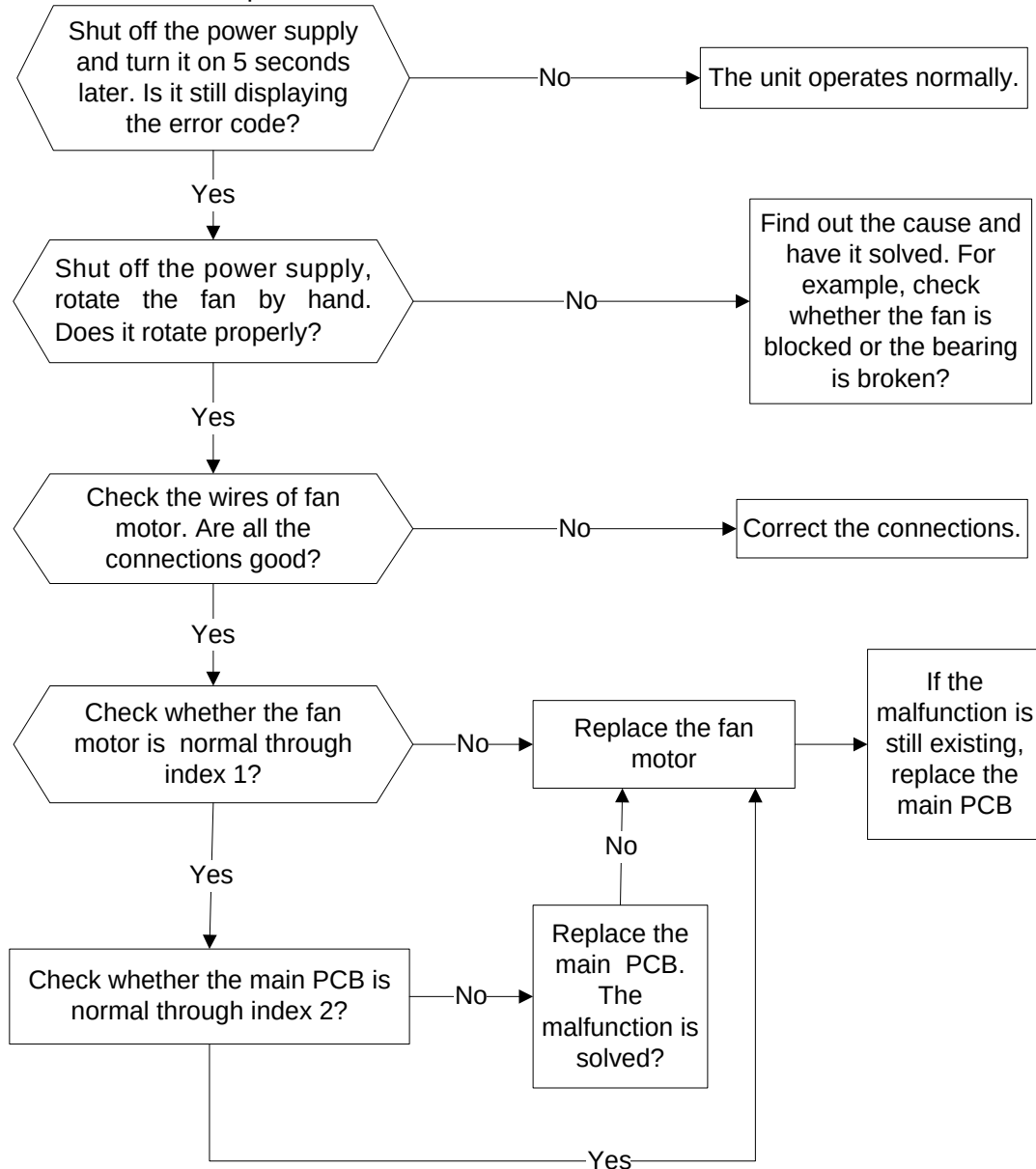
Shut off the power supply and turn it on 5 seconds later. Is it still displaying the error code?



2.4.1.4. Full-water malfunction



2.4.1.5. Indoor fan speed has been out of control.

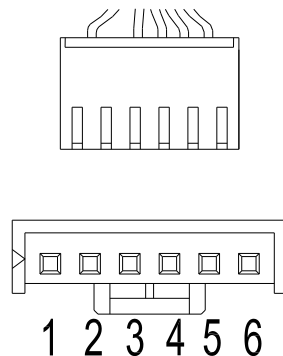


Index 1:

1. Indoor DC fan motor (control chip is inside fan motor)

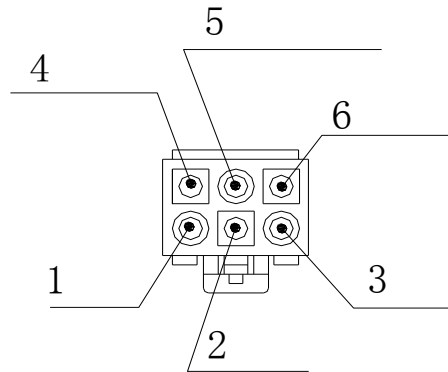
Measure the resistance value of each winding by using the tester. If any resistance value is zero, the fan motor must have problems and need to be replaced.

For other models:



NO.	Color
1	Red
2	---
3	Black
4	White
5	Yellow
6	Blue

For console:



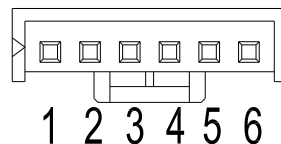
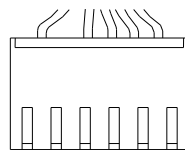
NO.	Color
1	Red
2	---
3	White
4	Blue
5	Yellow
6	Black

Index2:

1. Indoor DC fan motor(control chip is inside fan motor)

Power on and when the unit is in standby, measure the voltage of pin1-pin3, pin4-pin3 in fan motor connector. If the value of the voltage is not in the range showing in below table, the PCB must have problems and need to be replaced.

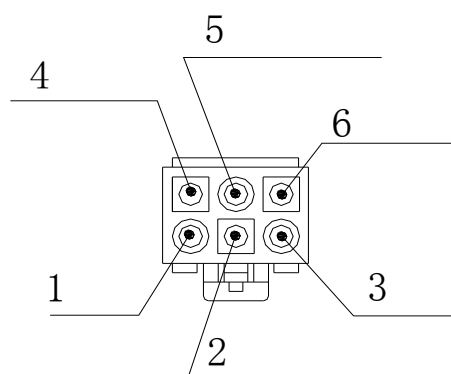
For other models:



DC motor voltage input and output

NO.	Color	Signal	Voltage
1	Red	Vs/Vm	192V~380V
2	---	---	---
3	Black	GND	0V
4	White	Vcc	13.5-16.5V
5	Yellow	Vsp	0~6.5V
6	Blue	FG	15V

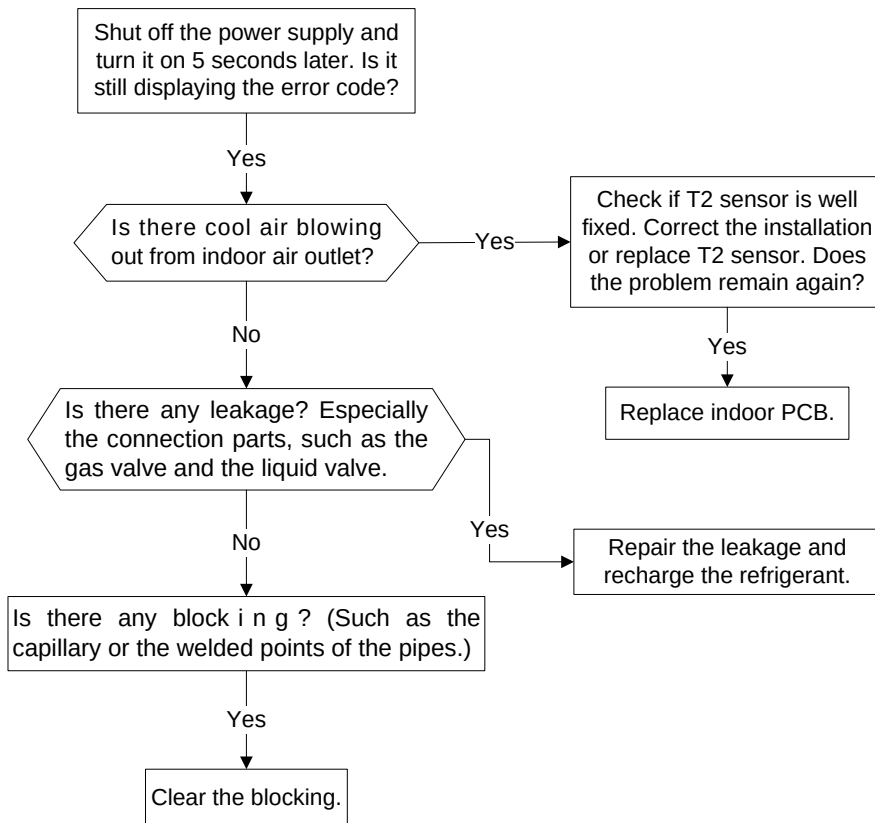
For console:



DC motor voltage input and output

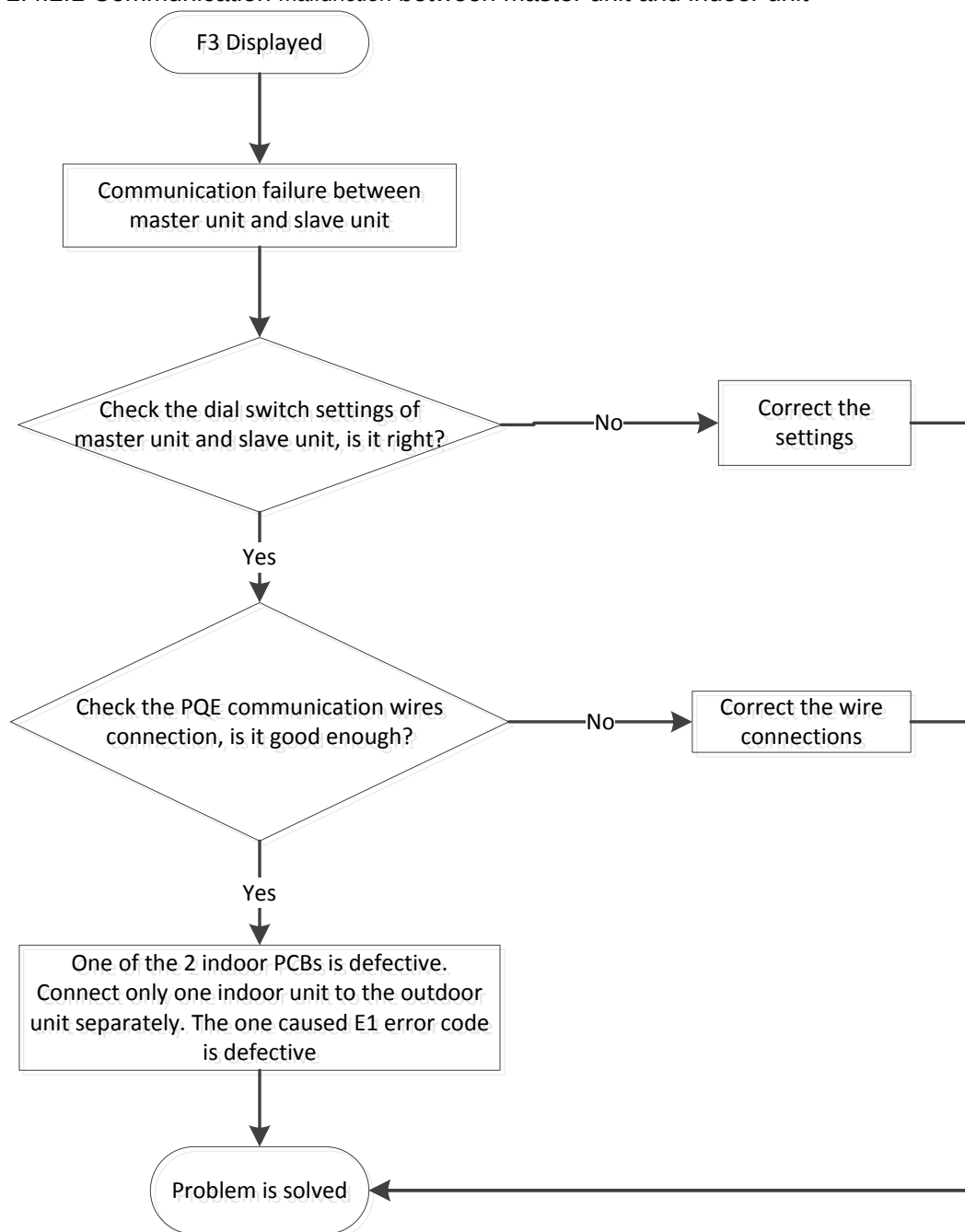
NO.	Color	Signal	Voltage
1	Red	VDC	310V
2	---	---	---
3	White	Vcc	15V
4	Blue	FG	15V
5	Yellow	Vsp	0-7.5V
6	Black	GND	0V

2.4.1.6. Refrigerant Leakage Detection



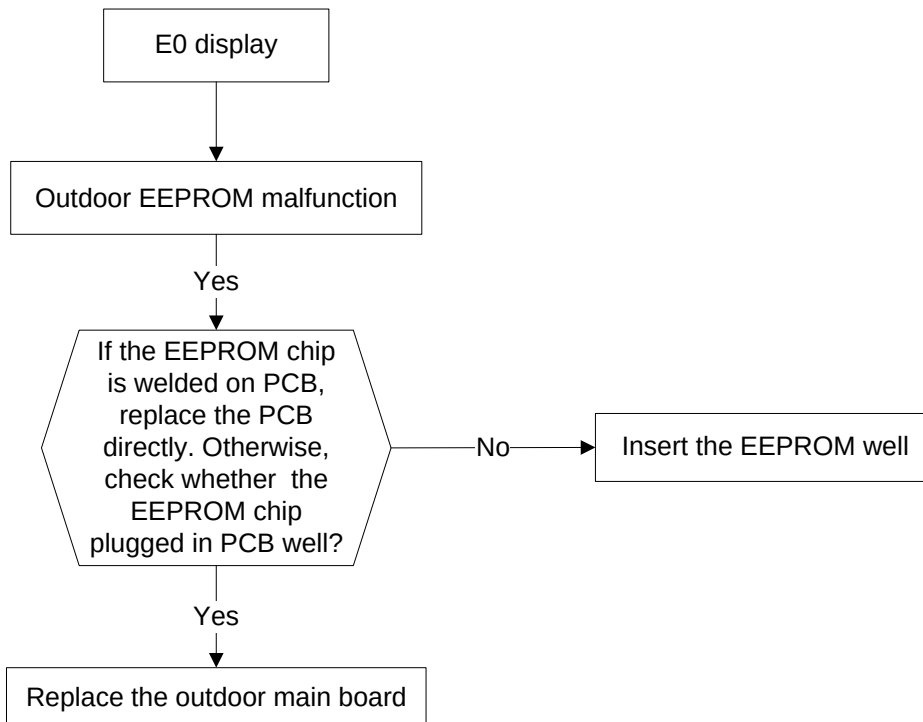
2.4.2 For the unit with TWINS function(For the super-slim cassette & A5 duct)

2.4.2.1 Communication malfunction between master unit and indoor unit

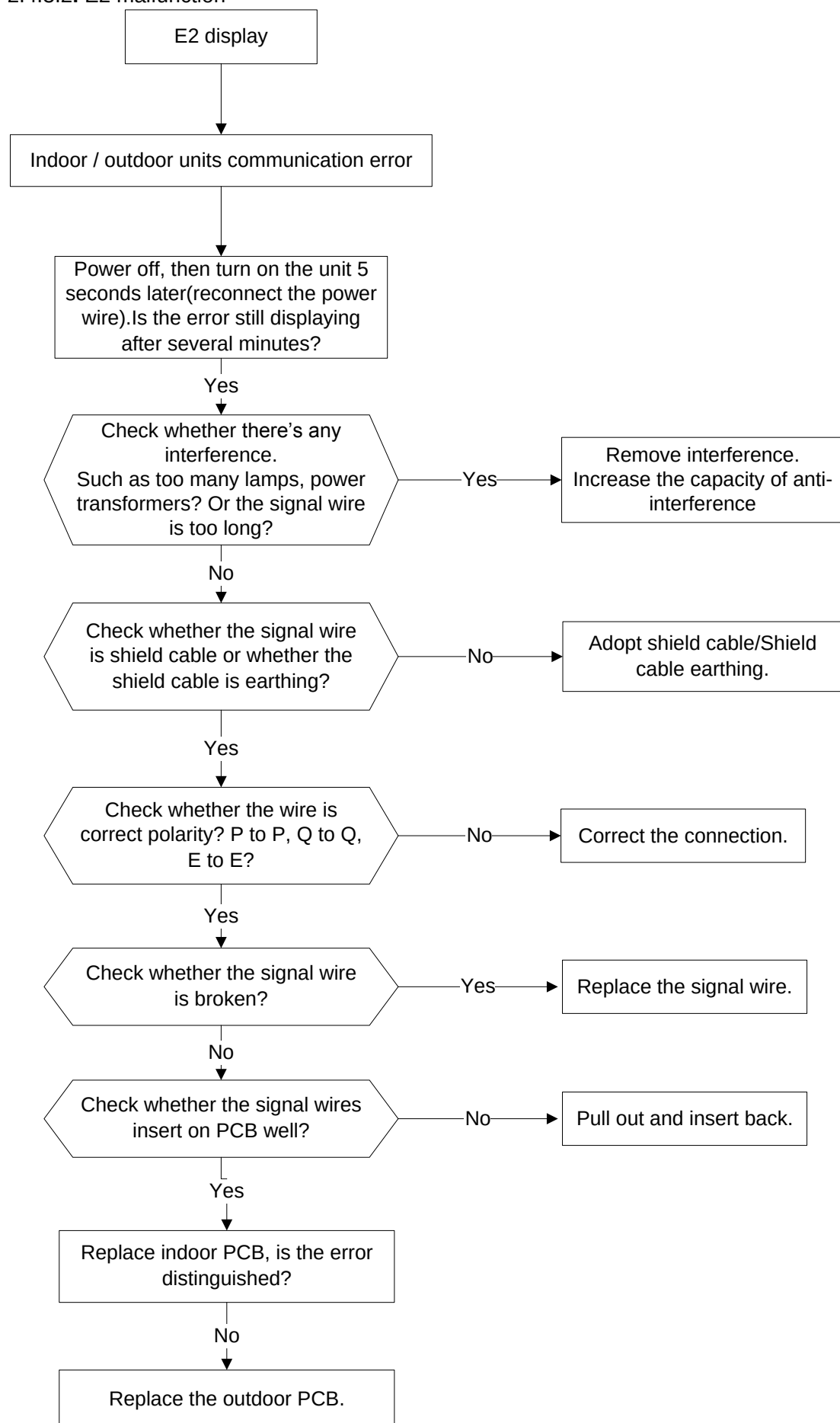


2.4.2.2 Other malfunction between master unit and indoor unit

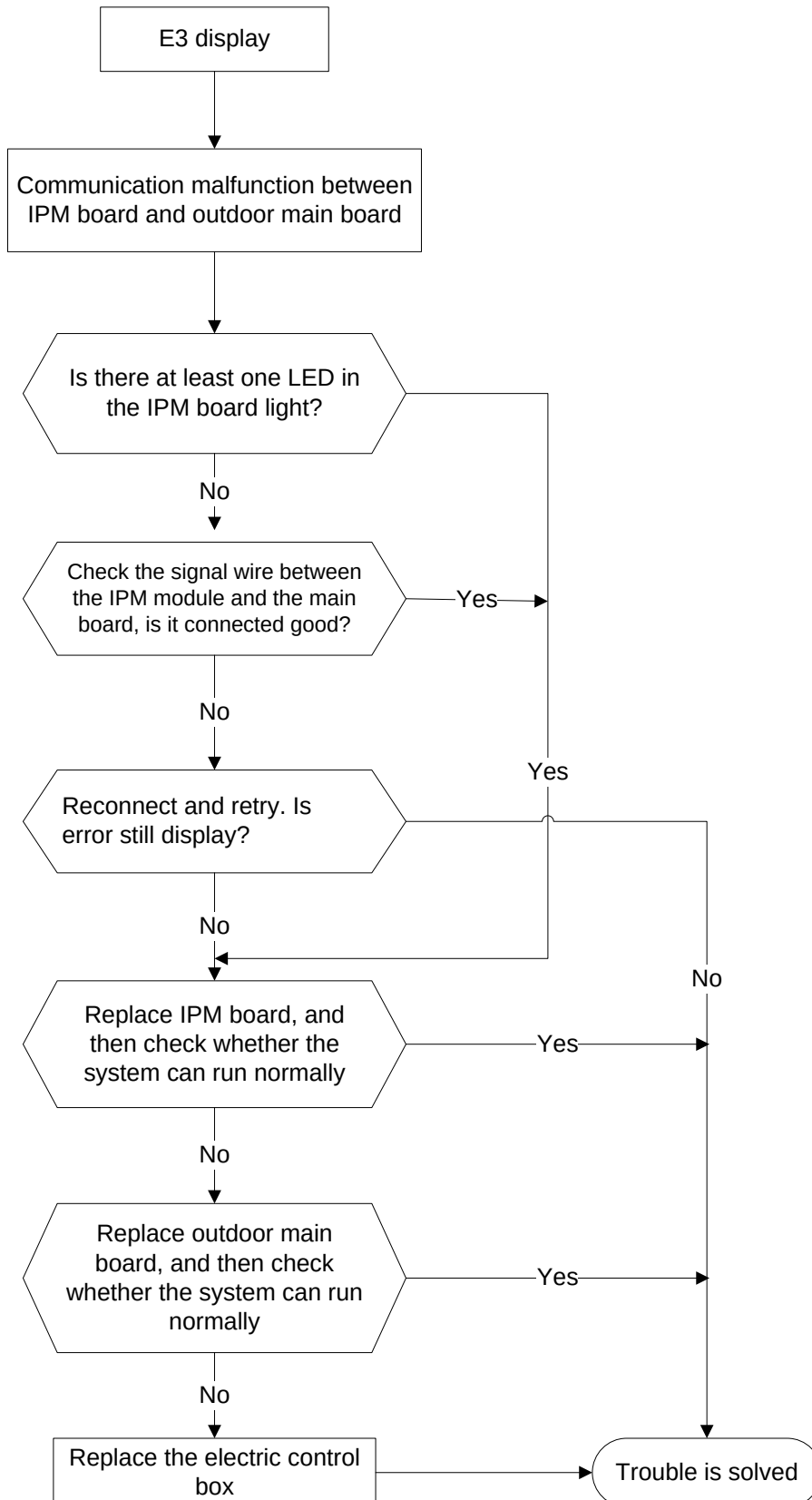
One indoor unit displays "F4", which means another indoor unit is faulty. Check another indoor unit's error code and then follow the appropriate solutions to solve the malfunction.

2.4.3 For the outdoor unit**2.4.3.1. E0 malfunction**

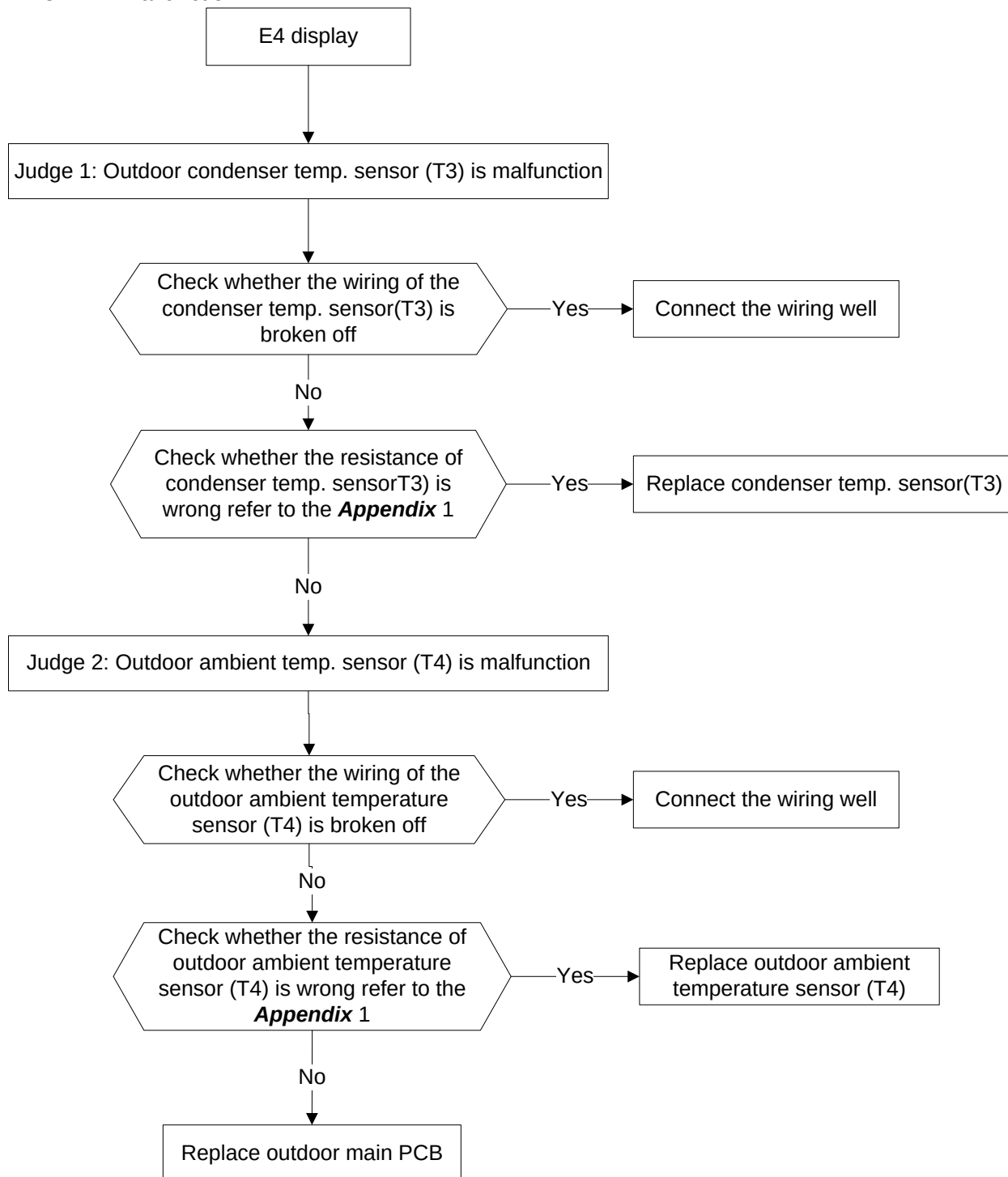
2.4.3.2. E2 malfunction



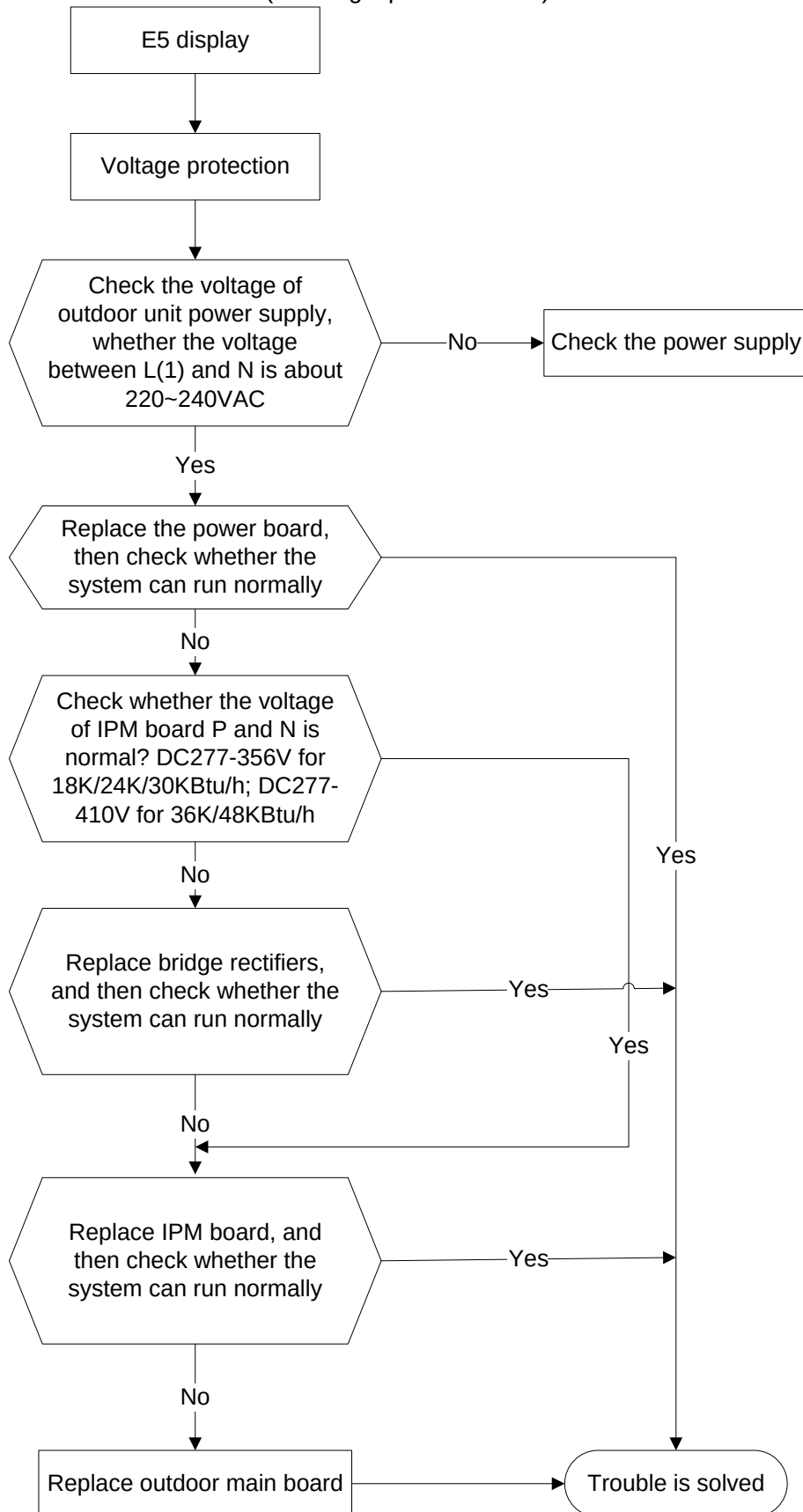
2.4.3.3. E3 malfunction



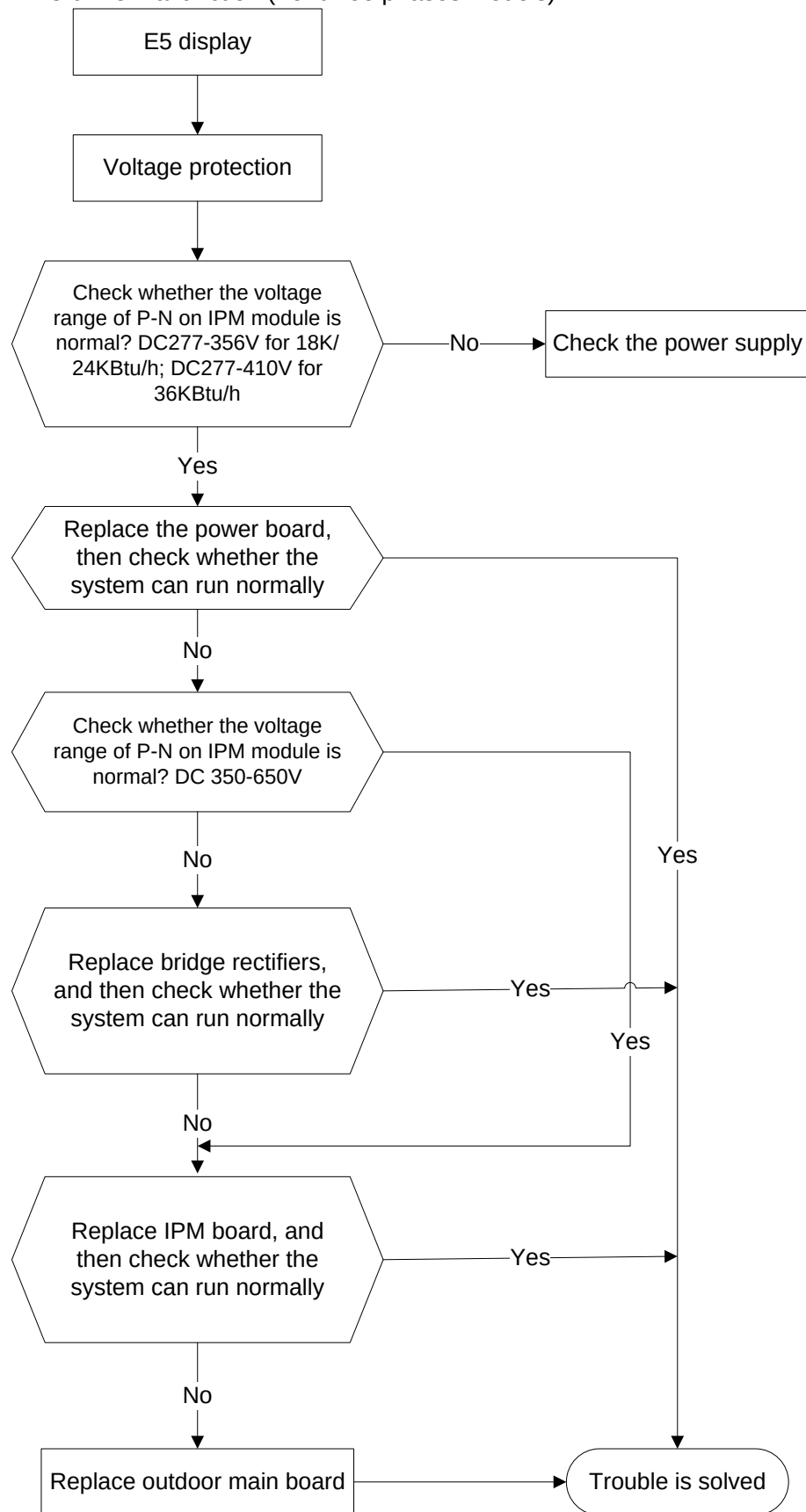
2.4.3.4. E4 malfunction



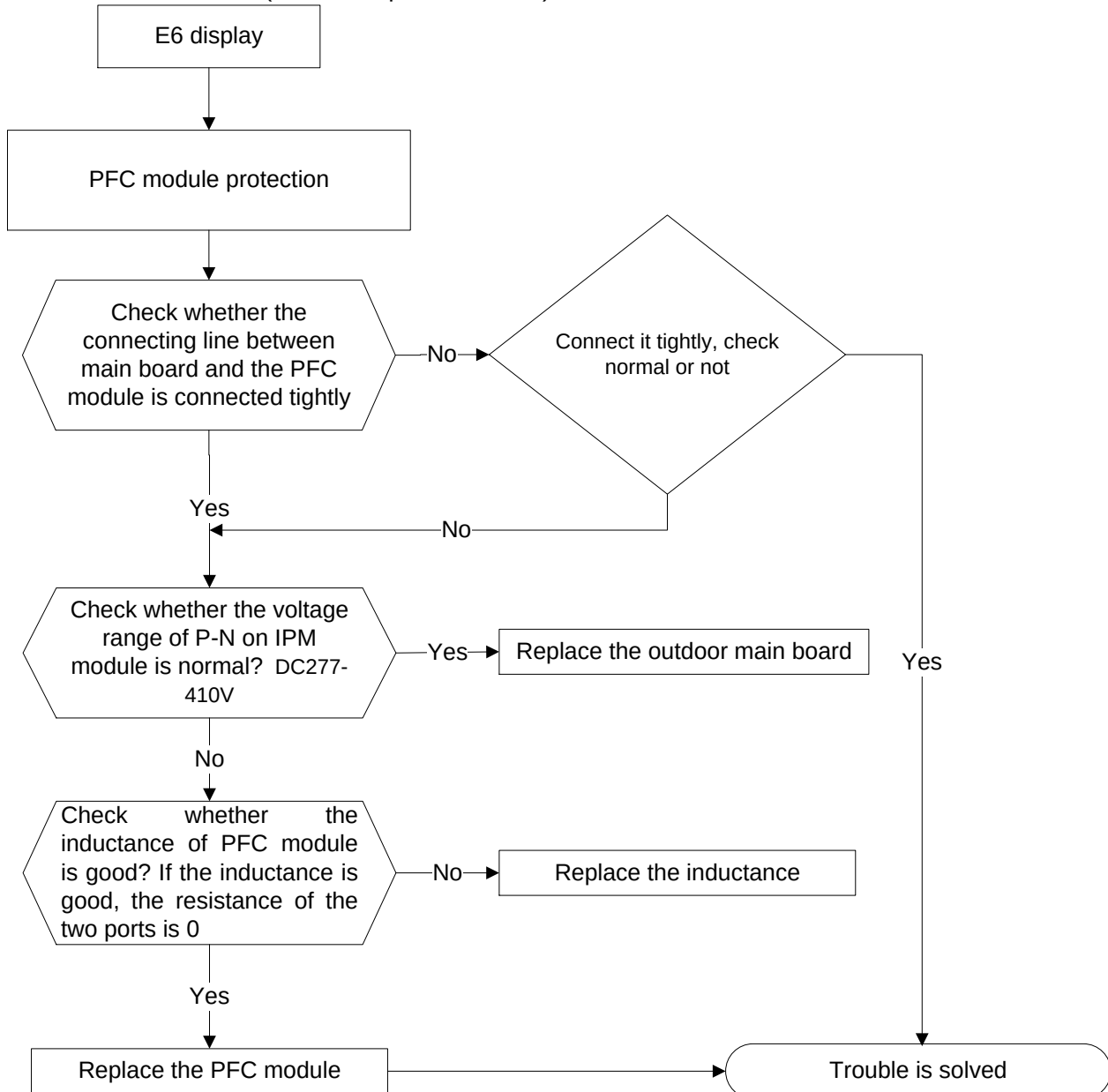
2.4.3.5. E5 malfunction (For single phase models)



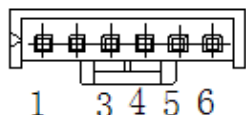
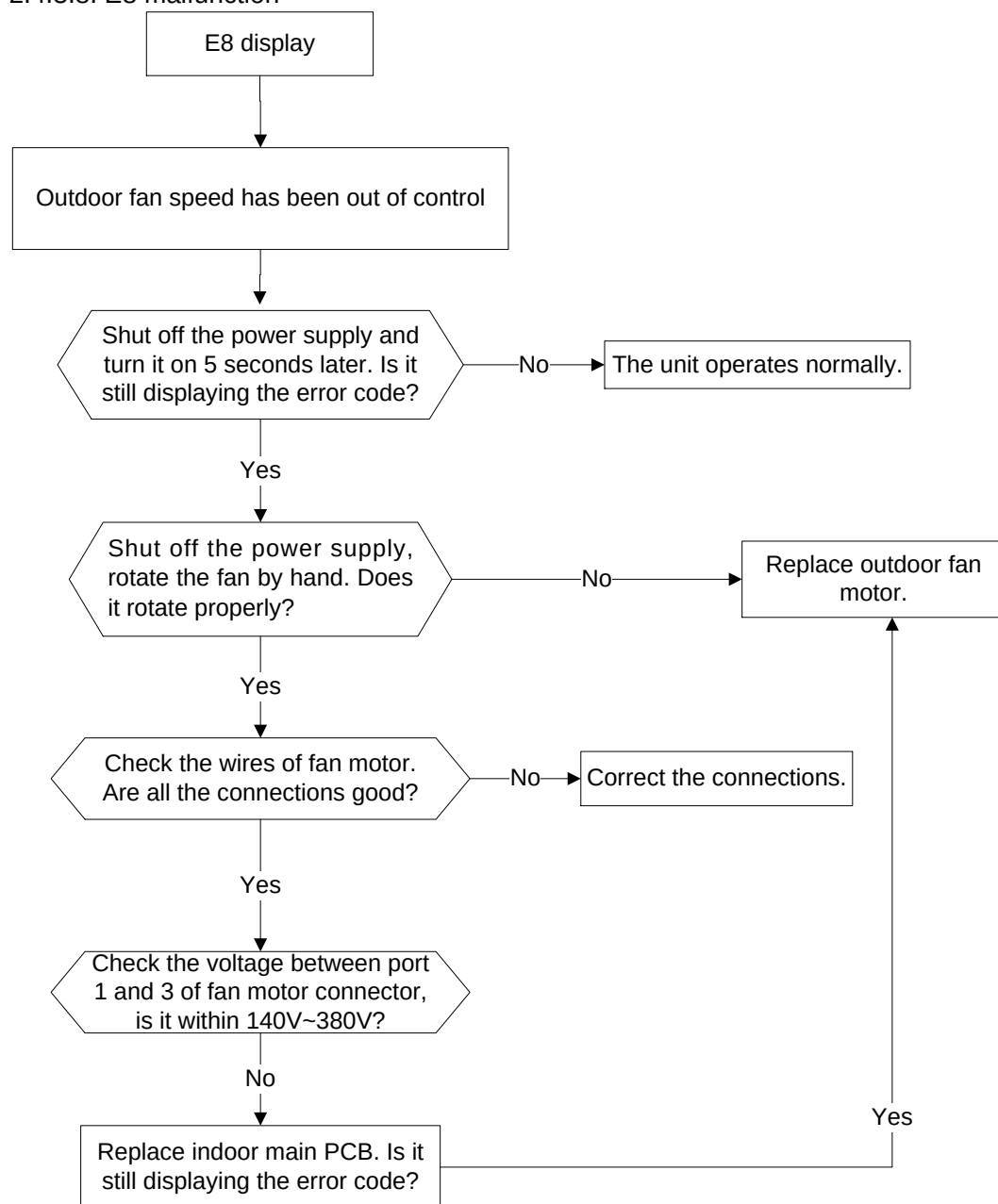
2.4.3.6. E5 malfunction (For three phases models)



2.4.3.7. E6 malfunction (For 36K 1-phase models)



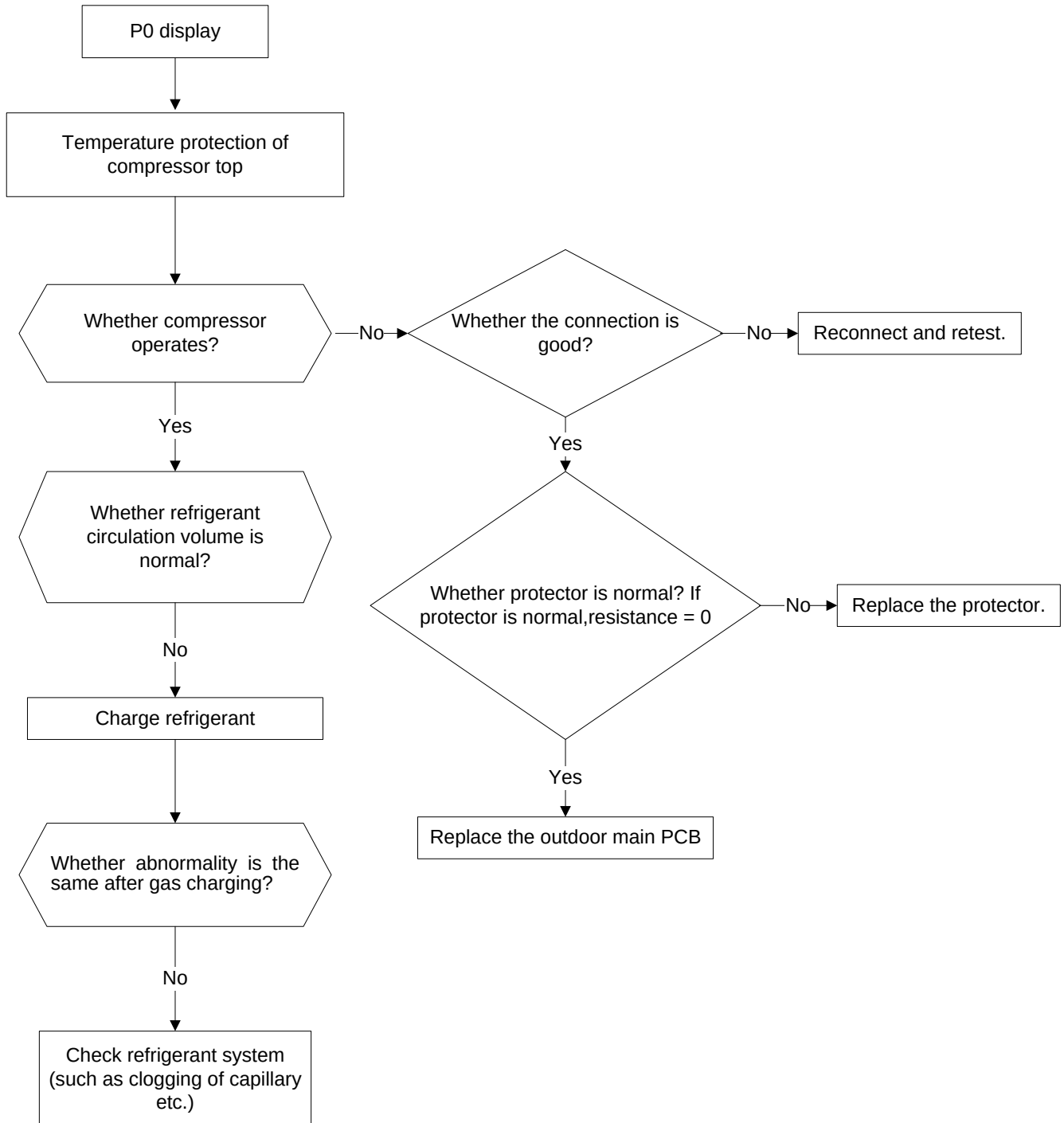
2.4.3.8. E8 malfunction



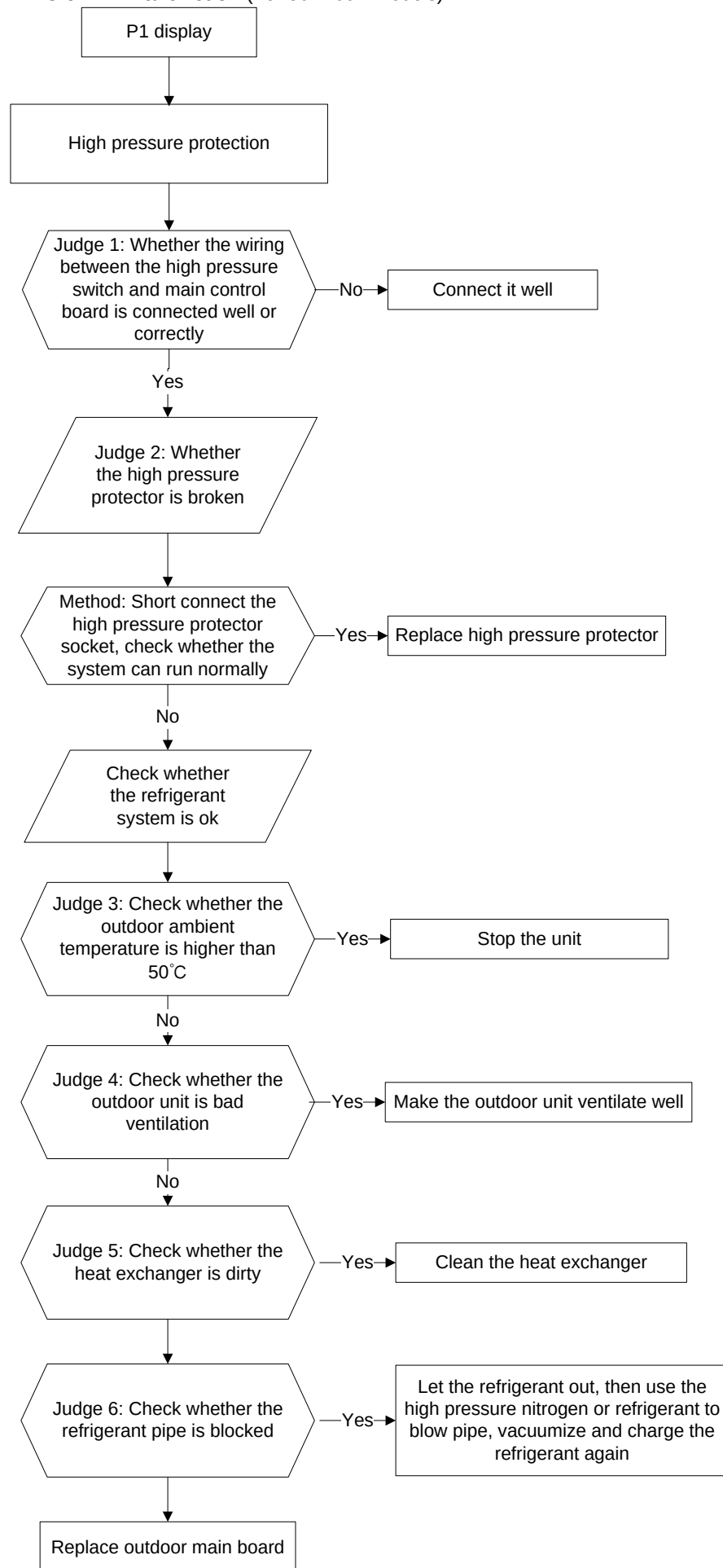
DC motor voltage input and output

NO.	Color	Signal	Voltage
1	Red	Vs/Vm	140~380V
2	---	---	---
3	Black	GND	0V
4	White	Vcc	13.5~16.5V
5	Yellow	Vsp	0~6.5V
6	Blue	FG	15V

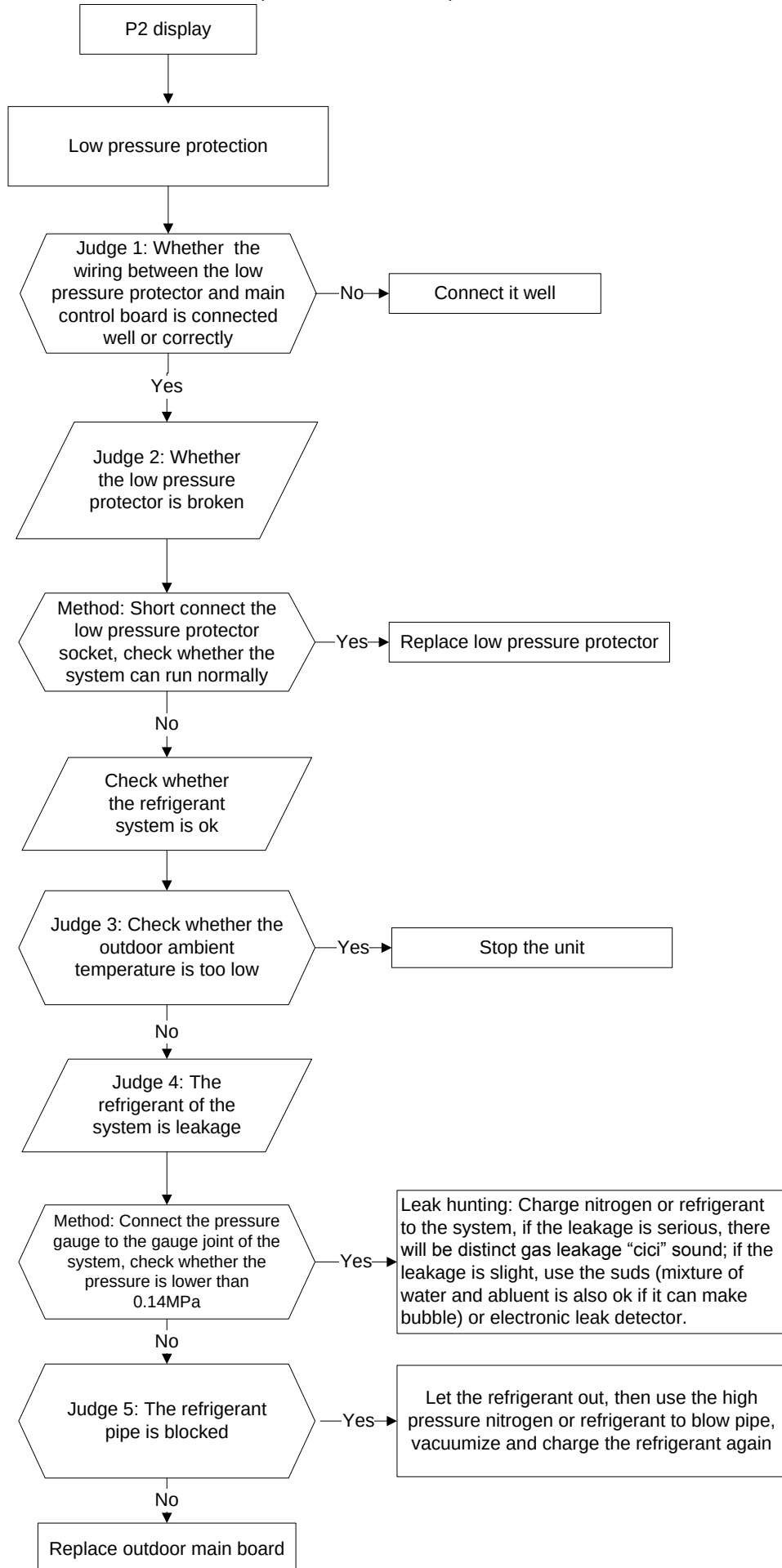
2.4.3.8. P0 malfunction



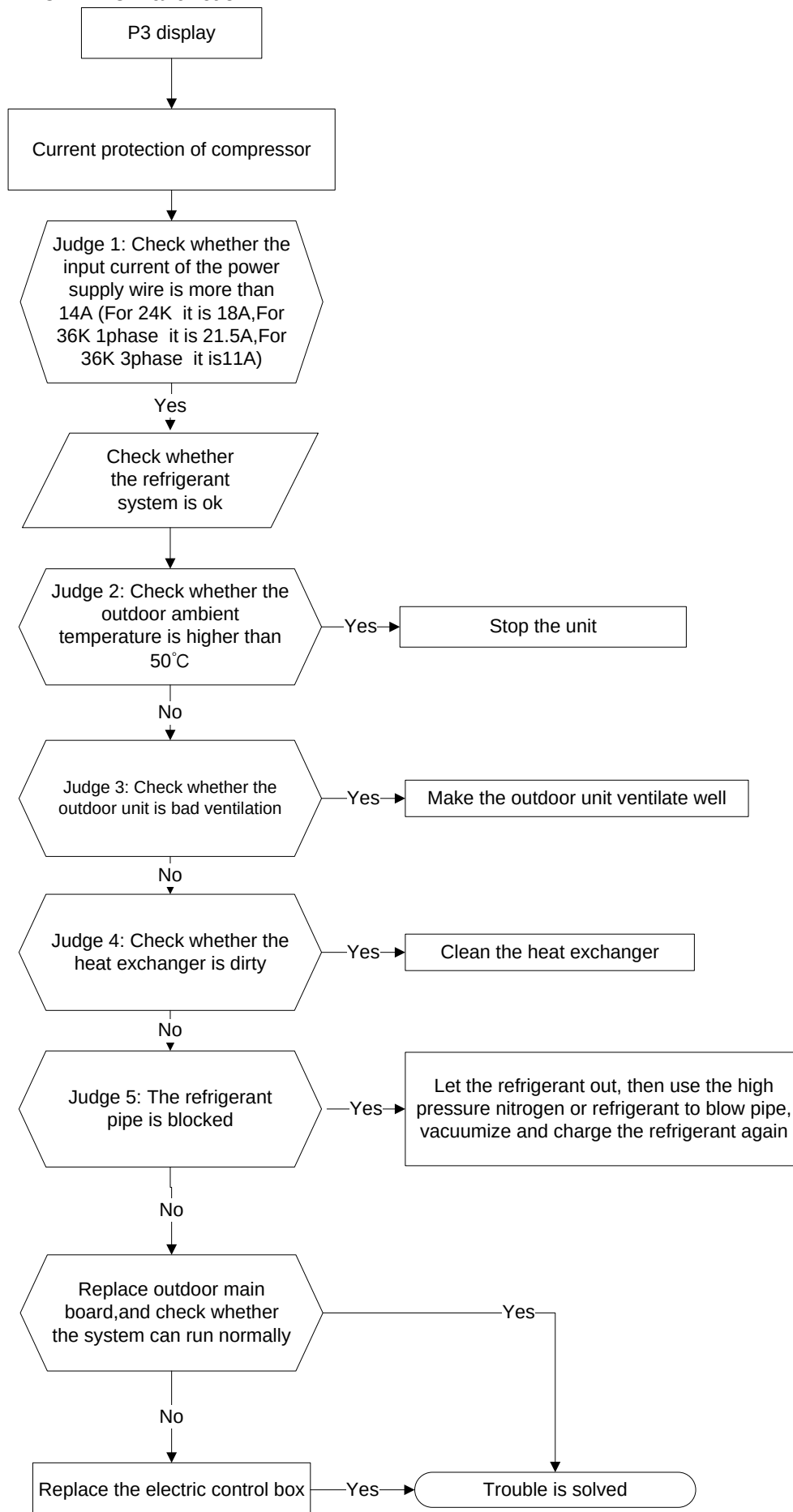
2.4.3.9. P1 malfunction (For 36K~60K models)



2.4.3.10. P2 malfunction (For 36K~60K models)

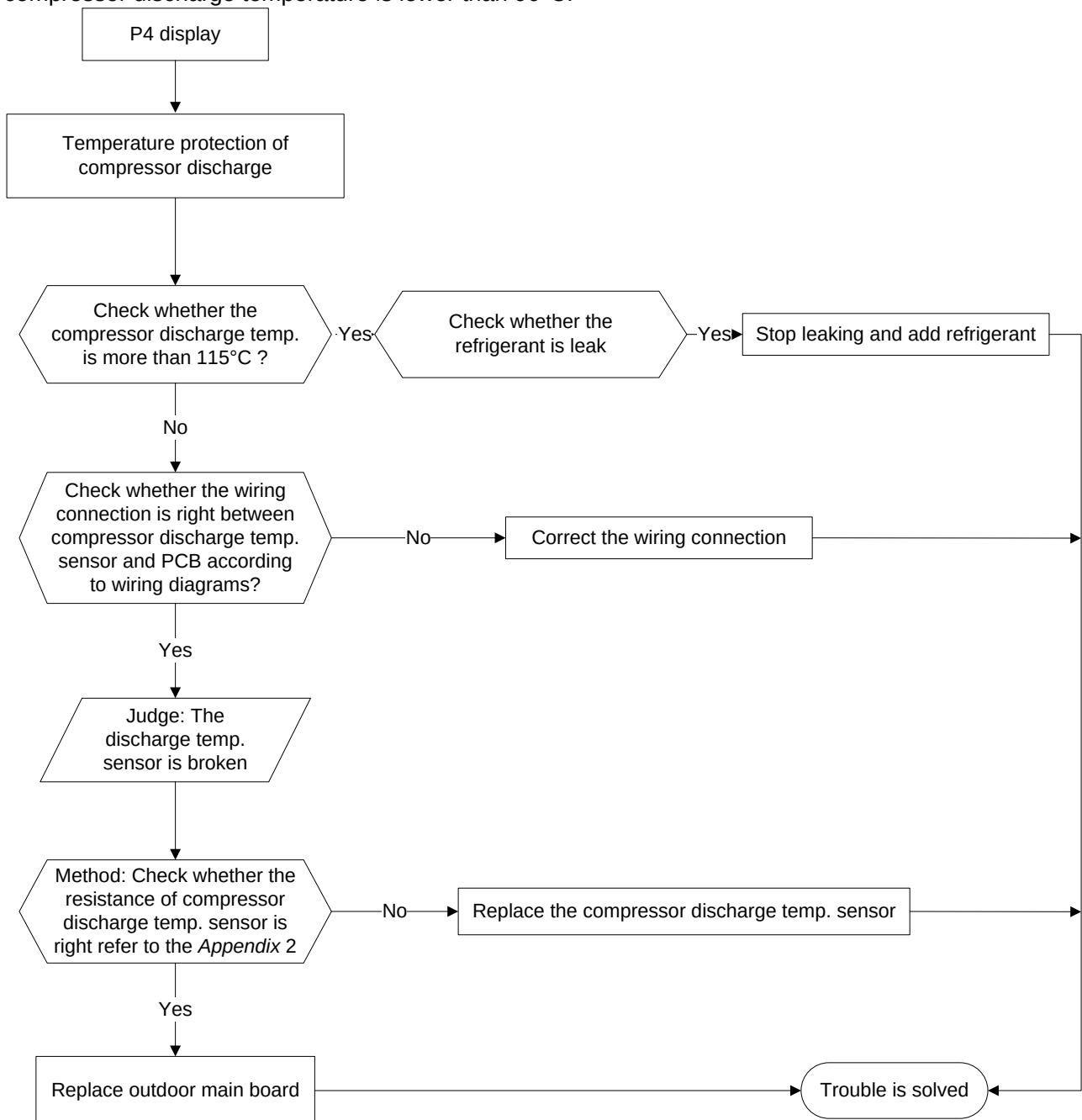


2.4.3.11. P3 malfunction



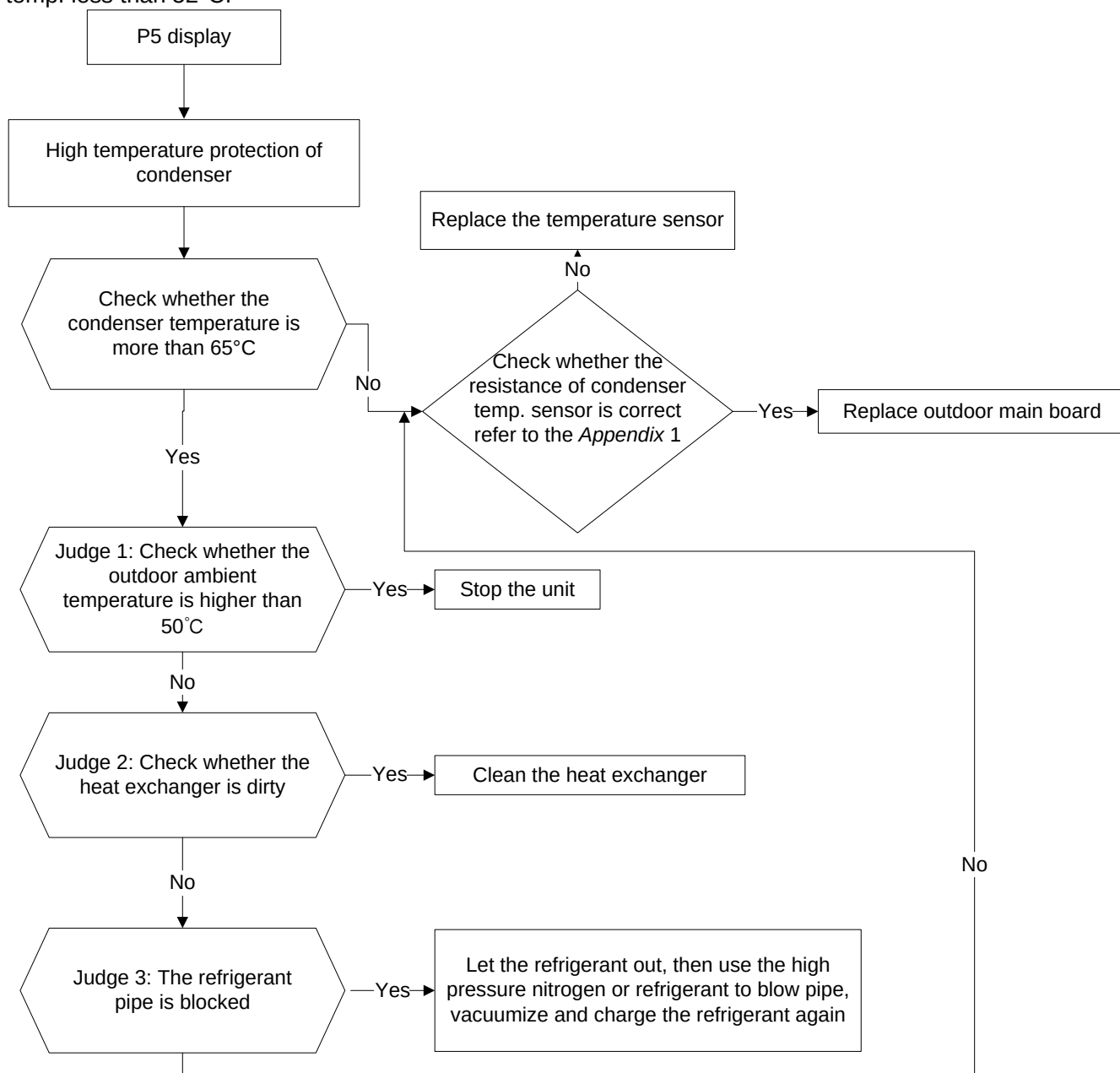
2.4.3.12. P4 malfunction

When compressor discharge temperature is higher than 115°C, the unit will stop, and unit runs again when compressor discharge temperature is lower than 90°C.



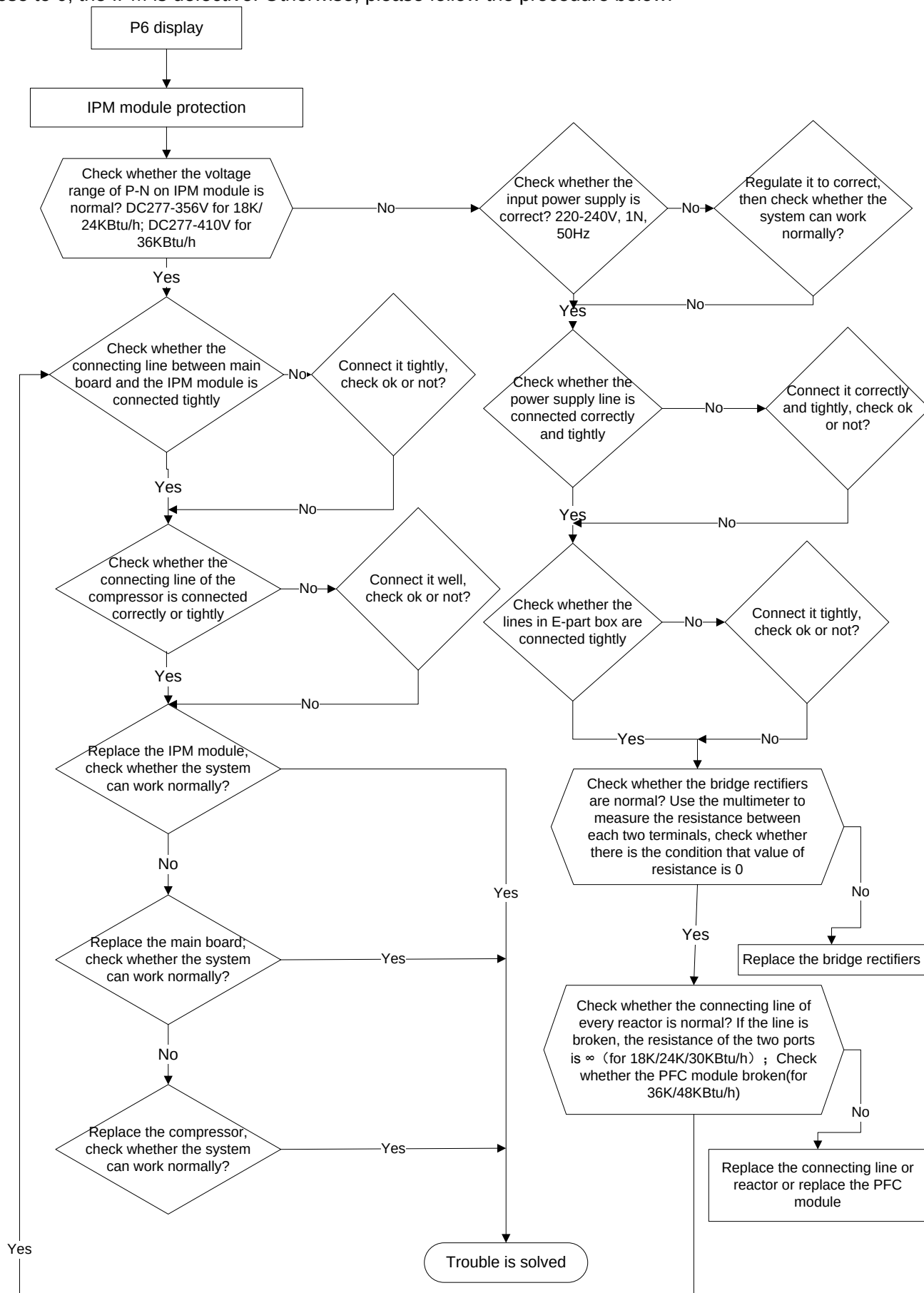
2.4.3.13. P5 malfunction

When condenser high temp. is more than 65°C, the unit will stop, and unit runs again when outdoor pipe temp. less than 52°C.



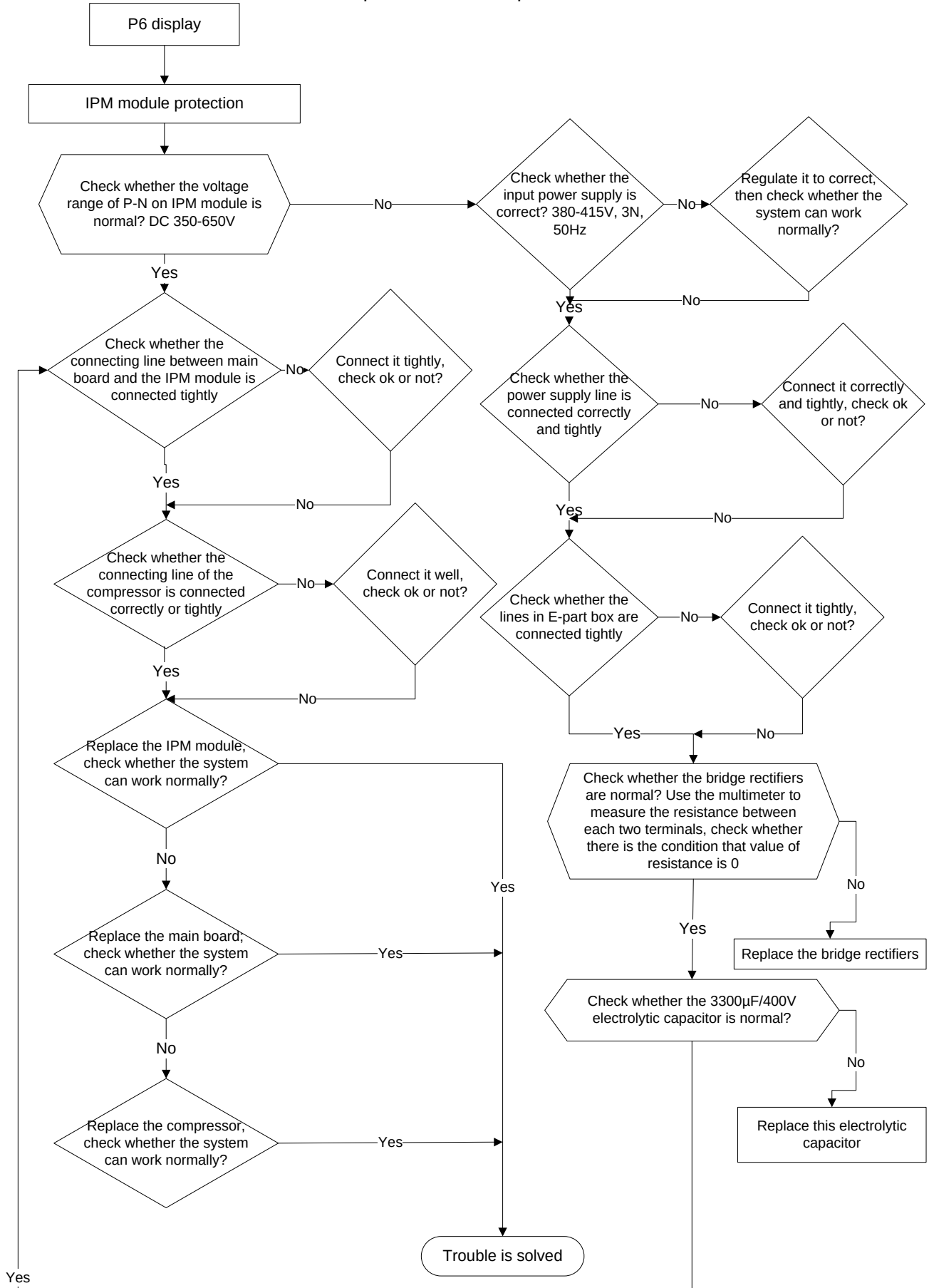
2.4.3.14. P6 malfunction (For single phase models)

At first test the resistance between every two ports of U, V, W of IPM and P, N. If any result of them is 0 or close to 0, the IPM is defective. Otherwise, please follow the procedure below:

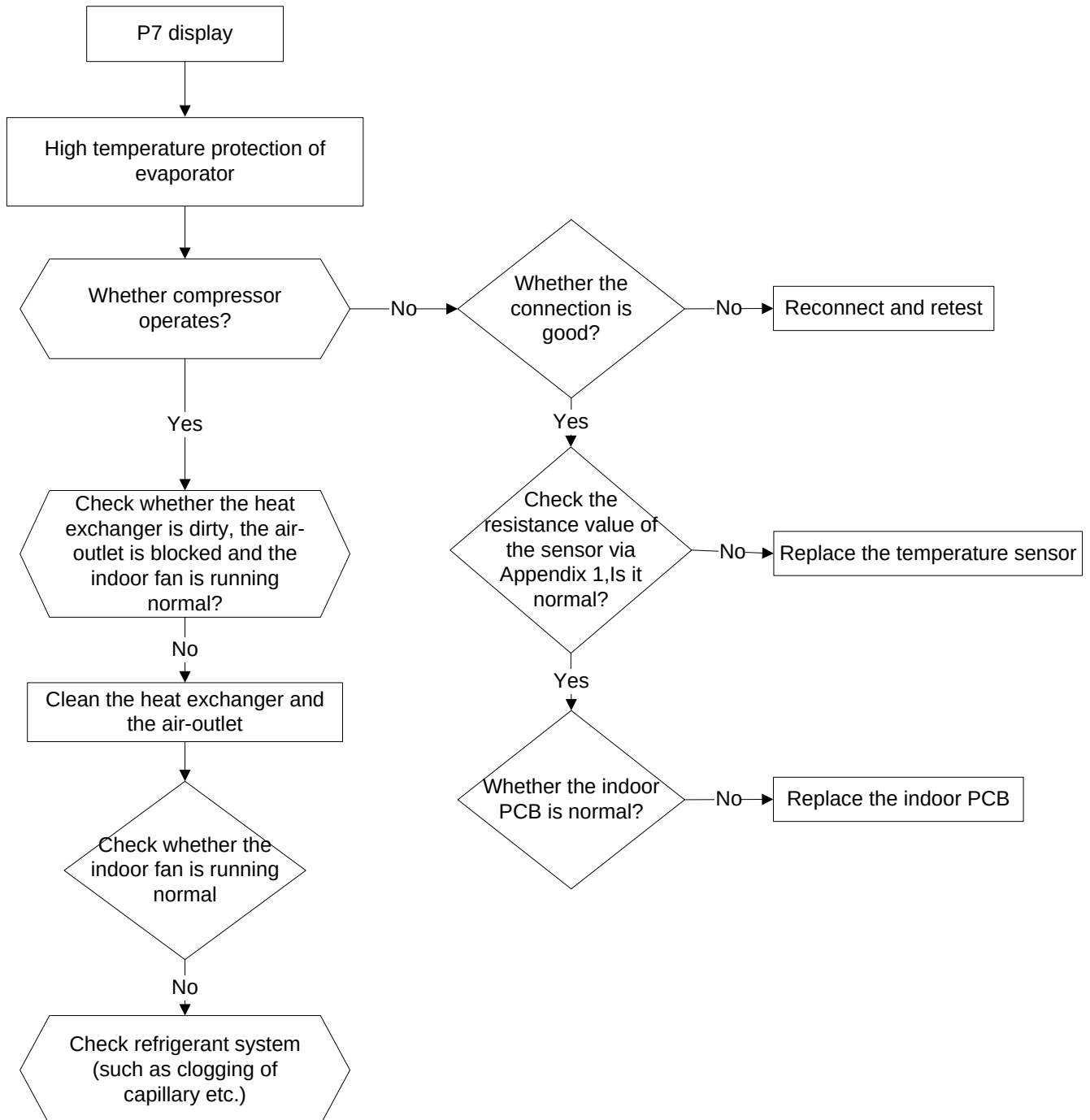


2.4.3.15. P6 malfunction (For three phases models)

At first test the resistance between every two ports of U, V, W of IPM and P, N. If any result of them is 0 or close to 0, the IPM is defective. Otherwise, please follow the procedure below:



2.4.3.16. P7 malfunction



Appendix 1 Temperature Sensor Resistance Value Table (°C--K)

°C	K Ohm	°C	K Ohm	°C	K Ohm	°C	K Ohm
-20	115.266	20	12.6431	60	2.35774	100	0.62973
-19	108.146	21	12.0561	61	2.27249	101	0.61148
-18	101.517	22	11.5000	62	2.19073	102	0.59386
-17	96.3423	23	10.9731	63	2.11241	103	0.57683
-16	89.5865	24	10.4736	64	2.03732	104	0.56038
-15	84.2190	25	10.000	65	1.96532	105	0.54448
-14	79.3110	26	9.55074	66	1.89627	106	0.52912
-13	74.5360	27	9.12445	67	1.83003	107	0.51426
-12	70.1698	28	8.71983	68	1.76647	108	0.49989
-11	66.0898	29	8.33566	69	1.70547	109	0.48600
-10	62.2756	30	7.97078	70	1.64691	110	0.47256
-9	58.7079	31	7.62411	71	1.59068	111	0.45957
-8	56.3694	32	7.29464	72	1.53668	112	0.44699
-7	52.2438	33	6.98142	73	1.48481	113	0.43482
-6	49.3161	34	6.68355	74	1.43498	114	0.42304
-5	46.5725	35	6.40021	75	1.38703	115	0.41164
-4	44.0000	36	6.13059	76	1.34105	116	0.40060
-3	41.5878	37	5.87359	77	1.29078	117	0.38991
-2	39.8239	38	5.62961	78	1.25423	118	0.37956
-1	37.1988	39	5.39689	79	1.21330	119	0.36954
0	35.2024	40	5.17519	80	1.17393	120	0.35982
1	33.3269	41	4.96392	81	1.13604	121	0.35042
2	31.5635	42	4.76253	82	1.09958	122	0.3413
3	29.9058	43	4.57050	83	1.06448	123	0.33246
4	28.3459	44	4.38736	84	1.03069	124	0.32390
5	26.8778	45	4.21263	85	0.99815	125	0.31559
6	25.4954	46	4.04589	86	0.96681	126	0.30754
7	24.1932	47	3.88673	87	0.93662	127	0.29974
8	22.5662	48	3.73476	88	0.90753	128	0.29216
9	21.8094	49	3.58962	89	0.87950	129	0.28482
10	20.7184	50	3.45097	90	0.85248	130	0.27770
11	19.6891	51	3.31847	91	0.82643	131	0.27078
12	18.7177	52	3.19183	92	0.80132	132	0.26408
13	17.8005	53	3.07075	93	0.77709	133	0.25757
14	16.9341	54	2.95896	94	0.75373	134	0.25125
15	16.1156	55	2.84421	95	0.73119	135	0.24512
16	15.3418	56	2.73823	96	0.70944	136	0.23916
17	14.6181	57	2.63682	97	0.68844	137	0.23338
18	13.9180	58	2.53973	98	0.66818	138	0.22776
19	13.2631	59	2.44677	99	0.64862	139	0.22231

Appendix 2

Unit: °C---K				Discharge temp. sensor table			
-20	542.7	20	68.66	60	13.59	100	3.702
-19	511.9	21	65.62	61	13.11	101	3.595
-18	483	22	62.73	62	12.65	102	3.492
-17	455.9	23	59.98	63	12.21	103	3.392
-16	430.5	24	57.37	64	11.79	104	3.296
-15	406.7	25	54.89	65	11.38	105	3.203
-14	384.3	26	52.53	66	10.99	106	3.113
-13	363.3	27	50.28	67	10.61	107	3.025
-12	343.6	28	48.14	68	10.25	108	2.941
-11	325.1	29	46.11	69	9.902	109	2.86
-10	307.7	30	44.17	70	9.569	110	2.781
-9	291.3	31	42.33	71	9.248	111	2.704
-8	275.9	32	40.57	72	8.94	112	2.63
-7	261.4	33	38.89	73	8.643	113	2.559
-6	247.8	34	37.3	74	8.358	114	2.489
-5	234.9	35	35.78	75	8.084	115	2.422
-4	222.8	36	34.32	76	7.82	116	2.357
-3	211.4	37	32.94	77	7.566	117	2.294
-2	200.7	38	31.62	78	7.321	118	2.233
-1	190.5	39	30.36	79	7.086	119	2.174
0	180.9	40	29.15	80	6.859	120	2.117
1	171.9	41	28	81	6.641	121	2.061
2	163.3	42	26.9	82	6.43	122	2.007
3	155.2	43	25.86	83	6.228	123	1.955
4	147.6	44	24.85	84	6.033	124	1.905
5	140.4	45	23.89	85	5.844	125	1.856
6	133.5	46	22.89	86	5.663	126	1.808
7	127.1	47	22.1	87	5.488	127	1.762
8	121	48	21.26	88	5.32	128	1.717
9	115.2	49	20.46	89	5.157	129	1.674
10	109.8	50	19.69	90	5	130	1.632
11	104.6	51	18.96	91	4.849		
12	99.69	52	18.26	92	4.703		
13	95.05	53	17.58	93	4.562		
14	90.66	54	16.94	94	4.426		
15	86.49	55	16.32	95	4.294	B(25/50)=3950K	
16	82.54	56	15.73	96	4.167		
17	78.79	57	15.16	97	4.045	R(90℃)=5KΩ±3%	
18	75.24	58	14.62	98	3.927		
19	71.86	59	14.09	99	3.812		



SERVICE MANUAL

DCI Light Commercial Series