



CONFIDENTIAL

Room Air Conditioner

SVC MANUAL (Exploded View)

MODEL : S4-W12JA1ZD.EC6GERU (B12TS.SSJ)

CAUTION

Before Servicing the unit, read the safety precautions in General SVC manual.
Only for authorized service personnel.

1. Specification

Buyer Model Factory Model	Set (Indoor / Outdoor)		Unit	B12TS.SS/J (B12TS.NS/J / B12TS.UA3)		
				S4-W12JA1ZD (S4NW12JA1ZD / S4UW12JA1ZD)		
Capacity	Cooling	Min ~ Rated ~ Max	kW	0.88	3.52	3.87
			Btu/h	3,000	12,000	13,200
			kJ/h	-	-	-
	Cooling (T3)	Min ~ Rated ~ Max	kW	-	-	-
			Btu/h	-	-	-
			kJ/h	-	-	-
Heating	Min ~ Rated ~ Max	kW	0.88	3.52	4.04	
		Btu/h	3,000	12,000	13,800	
		kJ/h	-	-	-	
Heating -7 °C	Max	kW	-	-	-	
		W	-	-	-	
Power Input	Cooling	Min ~ Rated ~ Max	W	140	1,085	1,400
			W	-	-	-
	Cooling (T3)	Min ~ Rated ~ Max	W	140	975	1,550
			W	-	-	-
Heating	Min ~ Rated ~ Max	A	0.70	5.00	6.50	
		A	-	-	-	
Running Current	Cooling (T3)	Min ~ Rated ~ Max	A	-	-	-
			A	0.70	4.80	7.50
EER			W/W	3.24		
			(Btu/h)/W	11.06		
			(kJ/h)/W	-		
			W/W	-		
EER (T3)			(Btu/h)/W	-		
			W/W	-		
SEER			(Btu/h)/W	17.50		
			W/W	3.61		
COP			(Btu/h)/W	12.31		
			(kJ/h)/W	-		
SCOP			-	-		
Energy Label Grade	Cooling / Heating		-	-/-		
Annual Energy Consumption	Cooling / Heating		kWh/year	1,220-240,50		
Power Supply			Ø, V, Hz	1,220-240,50		
Available Voltage Range			V	187 ~ 276		
Power Factor	Cooling / Heating		%	96 / 97		
Moisture Removal			l/h	0.80		
Indoor	Air Flow Rate	Cooling, Max / H / M / L	m ³ /min	12.5 / 9.3 / 7.2 / 2.7		
		Heating, Max / H / M / L	m ³ /min	13 / 10 / 7 / 5.5		
	Sound Pressure Level	Cooling, Max / H / M / L / SL	dB(A)	42 / 36 / 28 / 21		
		Heating, Max / H / M / L	dB(A)	42 / 36 / 31		
	Sound Power Level		dB(A)	-		
			dB(A)	-		
	Dimensions (W × H × D)	Net	mm	836.5 × 308 × 192.6		
		Shipping	mm	909 × 383 × 256		
	Weight	Net	kg	8.5		
		Shipping	kg	10.7		
Exterior Color Code			-	Munsell 7.5PB 0.2/20 (RAL 9005)		
Outdoor	Air Flow Rate	Max	m ³ /min	27.0		
			rpm	-		
	Fan Motor Speed	Cooling, Min ~ Max	rpm	-		
		Heating, Min ~ Max	rpm	-		
	Sound Pressure Level	Cooling, Rated	dB(A)	51		
		Heating, Rated	dB(A)	53		
	Sound Power Level		dB(A)	-		
			dB(A)	-		
	Dimensions (W × H × D)	Net	mm	717 × 483 × 230		
		Shipping	mm	837 × 530.5 × 332		
Weight	Net	kg	26.4			
	Shipping	kg	28.2			
Max. Fuse Size		A	20			
Exterior Color Code			-	Munsell 9.54Y 8.34/1.31 (RAL 9001)		
Operation Range	Cooling	°C DB	18 ~ 48			
	Heating	°C DB	-5 ~ 24			
	Heating	°C VVB	-5 ~ 18			
Circuit Breaker			A	15		
Power Supply Cable			No. × mm ²	3 × 1		
Power Supply to Unit			-	Outdoor		
Power and Communication Cable			No. × mm ²	4 × 0.75		
Piping	Size	Liquid	mm	ø 6.35		
		Gas	mm	ø 9.52		
Connections Method	Indoor / Outdoor	-	Flared / Flared			
			-	-		
Drain Hose Size	O.D. I.D.	mm	21.5, 16.0			
			-	-		
Between Indoor & Outdoor	Piping Length	Min / Standard / Max	m	3.6 / 7.5 / 15		
		No Charge	m	7.5		
	Max. Elevation Difference		m	7		
				-	-	
Piping Connection Heat Insulation			-	Both liquid and gas pipes		
Refrigerant	Type		-	R410A		
		Pre Charge	g	850		
		Additional Charge	g/m	20		
		Control	-	Capillary		
		Global Warning Potential	-	2087.5		
		t-CO ₂ eq	-	1.77		
Defrost Method			-	-		
Tool Code (Chassis)	Indoor / Outdoor		-	S/J / UA3		
Compressor	Type		-	Twin Rotary		
	Model		-	GST102MAA		
	Motor Type		-	BLDC		
	Oil Type / Maker		-	POE (RB68A) / Sun Oil or Jx Nippon		
	Oil Charge	cc	280			
	O.L.P. Name		-	-		
Manufacturer / Country of Origin		-	LG Electronics / China			
Fan(Indoor)	Type		-	Cross Flow Fan		
	Motor Output	W	30			
Fan(Outdoor)	Type		-	Propeller Fan		
	Motor Type		-	AC		
	Motor Output	W	25			
	Motor Insulation		-	Class E		
	Motor Enclosure / Ingress Protection		-	TEAO / IP43		
Heat Exchanger	Evaporator	Material, Tube / Fin	-	Cu / Al		
		(a × Row × Column × FPI/FPDM × L) × Qty.	#1	(ø7 x 2 x 15 x 21FPI x 618) x 1		
			#2	-		
			#3	-		
			#4	-		
	Condenser	Corrosion Protection	-	PCM		
		Fin Type	-	Slit		
		Material, Tube / Fin	-	Cu / Al		
		(a × Row × Column × FPI/FPDM × L) × Qty.	#1	(ø7 x 2 x 22 x 18FPI x 667) x 1		
		(a × Row × Column × FPI/FPDM × L) × Qty.	#2	-		
Corrosion Protection	-	Gold				
Fin Type	-	Louver				

Note

- : No Relation
- For Circuit Breaker Rating, please conform to local standards whenever necessary.
- Exterior color code is approximate value.
- It is difficult to measure air flow rate of sleep because of small values.
- Maximum heating capacity is for heating operation without any frost.
- Fan motor speed could vary ±20 rpm according to the operating conditions.
- It may cause reliability, performance, noise, and vibration problem, unless meeting the range of connecting pipe length. Keep the minimum piping length by making loops, although indoor unit and outdoor unit are close.
- This product contains fluorinated greenhouse gases.
- Some specifications may be changed without notifications due to our policy of innovation.

Conversion Formula
kW = Btu/h x 0.0002931
CFM = CMM x 35.3

2. Function

Category	Function	B12TS
		S4-W12JA1ZD
Air Flow	Air Supply Outlet	1
	Airflow Direction Control (Left & Right)	5 Steps
	Airflow Direction Control (Up & Down)	6 Steps
	Auto Swing (Left & Right)	○
	Auto Swing (Up & Down)	○
	Fan Speed Steps (Fan / Cool / Heat)	5 / 6 / 6
	Natural Wind (Auto Wind)	○
	Jet Cool / Jet Heat (Power Wind)	○ / ○
Air Purifying	Comfort Air	○
	Prefilter (Washable / Anti-Bacteria)	○
	Deodorizing Filter	X
	3M Micro Dust Filter	○
	3M Multi Protection Filter	X
Installation	Plasma Air Purifier (Ionizer)	○
	Drain Pump	X
Reliability	Hot Start	○
	Self Diagnosis	○
	De-ice Control (Defrost)	○
	Dry (Dehumidification) Operation	○
Convenience	Auto Changeover	○
	Auto Operation (Artificial Intelligence)	X
	Auto Cleaning (Coil Dry)	○
	Auto Restart Operation	○
	Child Lock ¹	X
	Forced Operation	○
	Group Control ¹	X
	Sleep Mode	7hr
	Timer 24hr (On/Off) / 7hr (Off)	○ / X
	Timer (Weekly) ¹	X
	Two Thermistor Control ¹	X
	Low Ambient Operation	○
	Overheating Protection	○
	Low Heating	X
	Voice Control	X
	Smart Scan (PIR)	X
	LG AC Tag On (NFC)	X
	Outdoor Silent Mode	○
	Mosquito Away	X
	Smart Diagnosis	○
Indoor Unit Display Type	Number Display	
Indoor Unit Display Light	On/Off	
Energy Saving	Energy Display	○
	Energy Saving	X
	Active Energy Control (Watt Option)	○
Individual Control	Gen Mode	X
	Wired Remote Controller (Premium) ²	X
	Wired Remote Controller (Standard) ²	X
	Wired Remote Controller (Simple with Mode Selection) ²	X
	Wired Remote Controller (Simple without Mode Selection) ²	X
	Handheld Wireless Controller	(See Remote Controller Section) AKB74955603
CAC Network Function	Setting Temperature Range (Cooling)	18~30 °C (64~86 °F)
	Setting Temperature Range (Heating)	16~30 °C (60~86 °F)
	General Central Controller (Non LGAP)	X
	Network Solution (LGAP)	○
	Dry Contact ²	X
Special Function Kit	PDI (Power Distribution Indicator) ²	X
	Outdoor Unit PI 485 ²	X
	Wi-Fi ²	Embedded
	Water Level Sensor Connection ²	X
	Wind Baffle Kit ²	X
	Sump Heater	X
Others	Sheath Heater ²	X
	Crank Case Heater	X
	Smart Inverter Monitoring System (SIMS) ²	X
	Mode Lock	X
Others	Temperature Control	Thermistor
	DRED (Demand Response Enabling Device)	X

Note

○ : Applied, X : Not Applied

• Filters are optional in some specific areas.

• ¹ : This function can be operated only when the wired remote controller is connected. The applicability of each function depends on the above table.

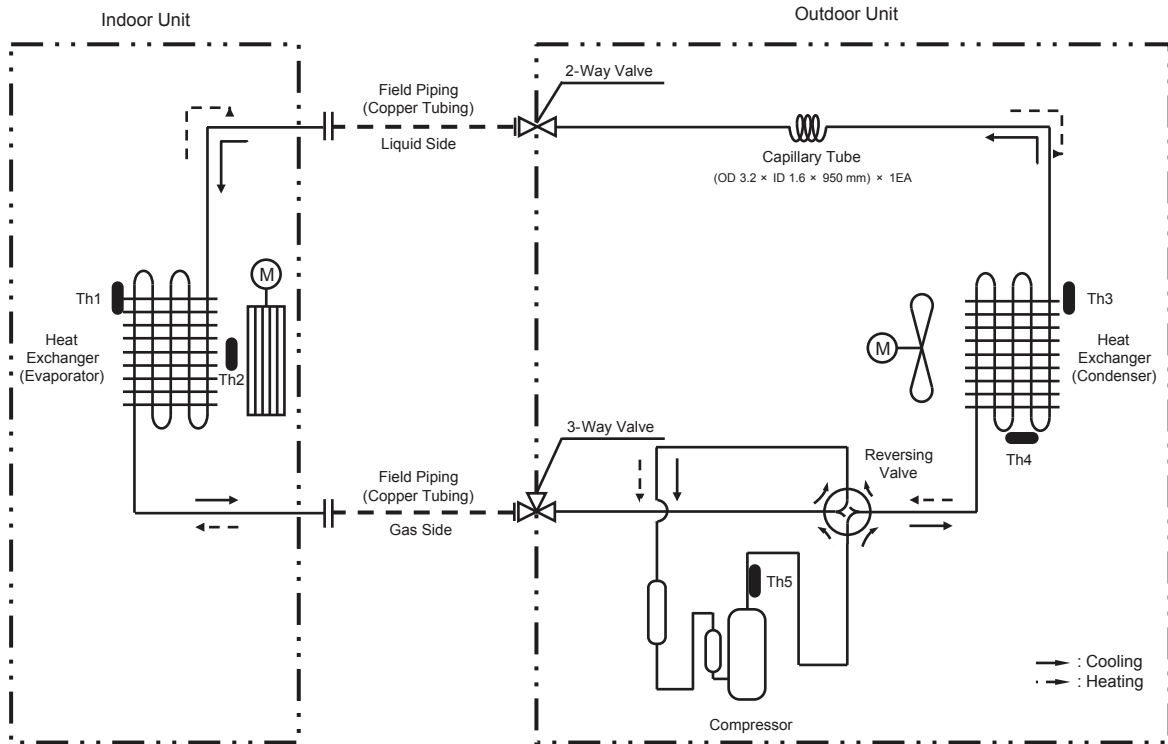
• ² : Optional accessories must be purchased separately. If shown as "Embedded", this function is included in product.

• The function Wi-Fi is only compatible with 2.4 GHz band. (802.11 b/g/n)

• Some specifications may be changed without notifications due to our policy of innovation.

3. Refrigerant Cycle Diagram

Model : S4-W12JA1ZD



LOC.	Description	PCB Connector
Th1	Thermistor for indoor air temperature	CN-TH1 (Indoor)
Th2	Thermistor for evaporator middle temperature	CN-TH3 (Indoor)
Th3	Thermistor for outdoor air temperature	CN-TH1 (Outdoor)
Th4	Thermistor for condensing temperature	
Th5	Thermistor for discharge pipe temperature	CN-TH2 (Outdoor)

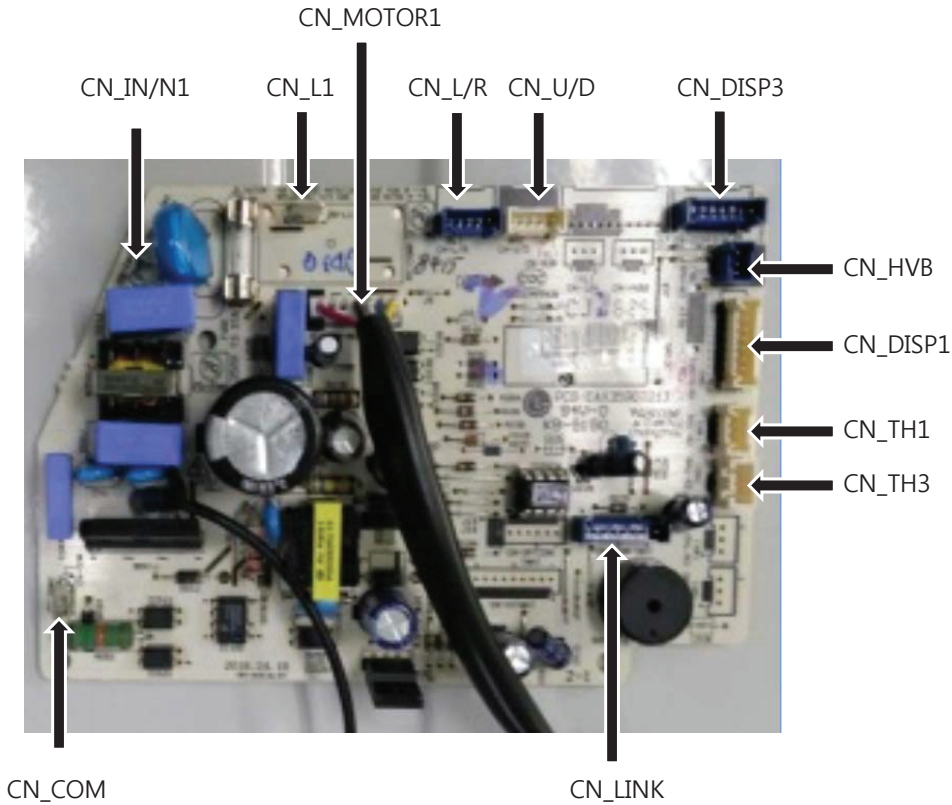
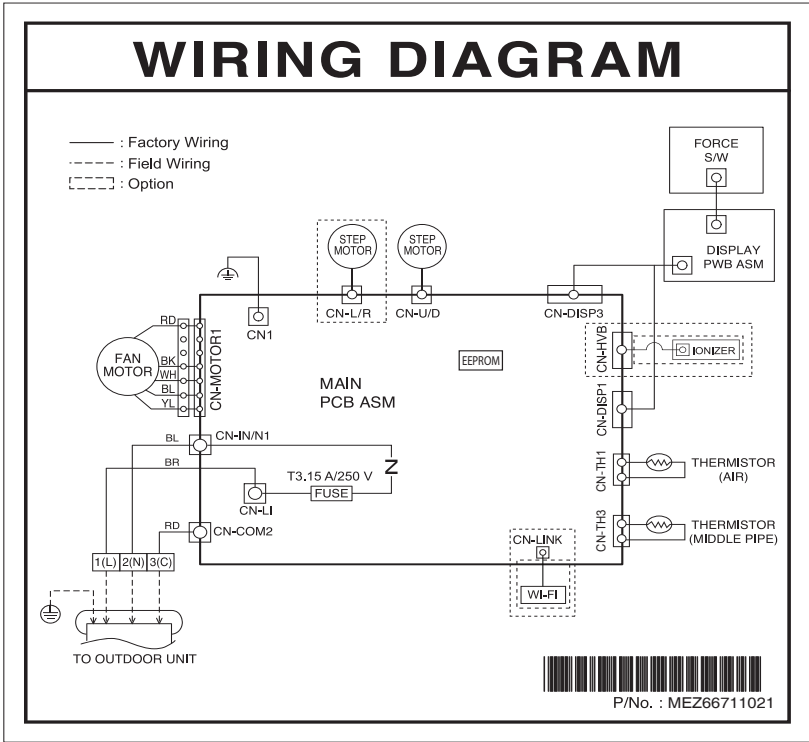
■ Refrigerant Pipe Connection Port Diameters

Model	Gas		Liquid	
	mm	inch	mm	inch
S4-W12JA1ZD	Ø 9.52	Ø 3/8	Ø 6.35	Ø 1/4

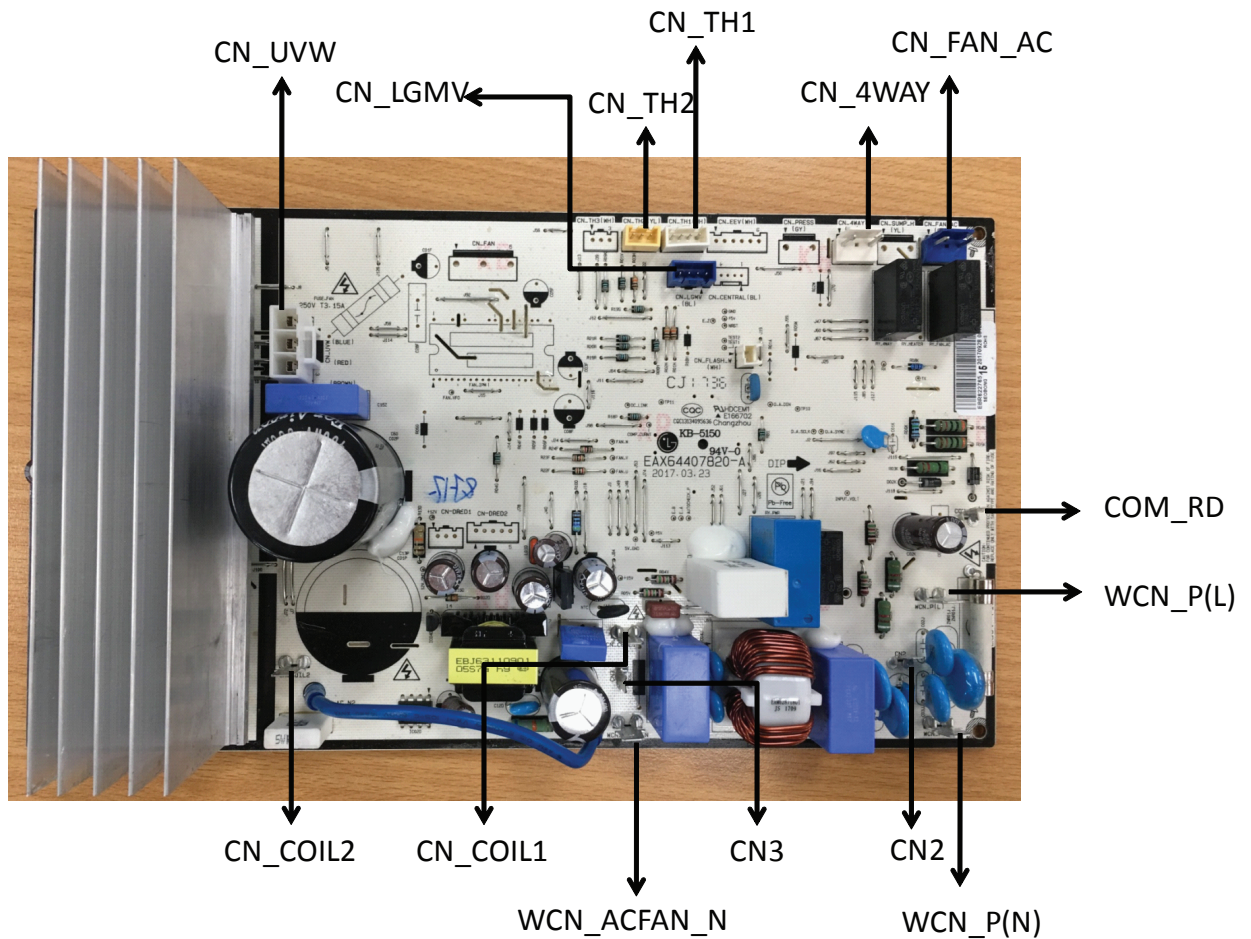
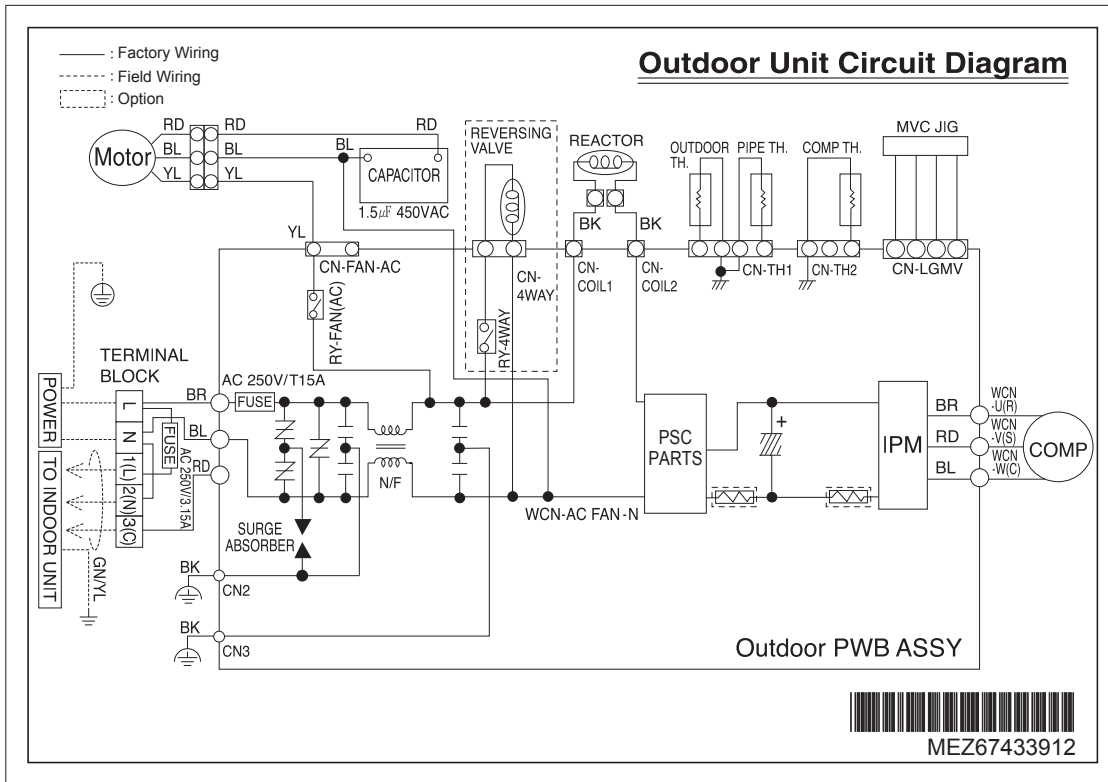
Appendix	Heat Exchanger	Propeller Fan	Cross Flow Fan	Compressor	Accumulator	4 Way Valve
	EEV (Electronic Expansion Valve)	Capillary Tube	2-Way Valve 3-Way Valve	Temperature Sensor	Pressure Sensor	Pressure Switch
	Check Valve	Flare Joint	Muffler	Strainer		

4. Wiring Diagrams

Indoor Unit

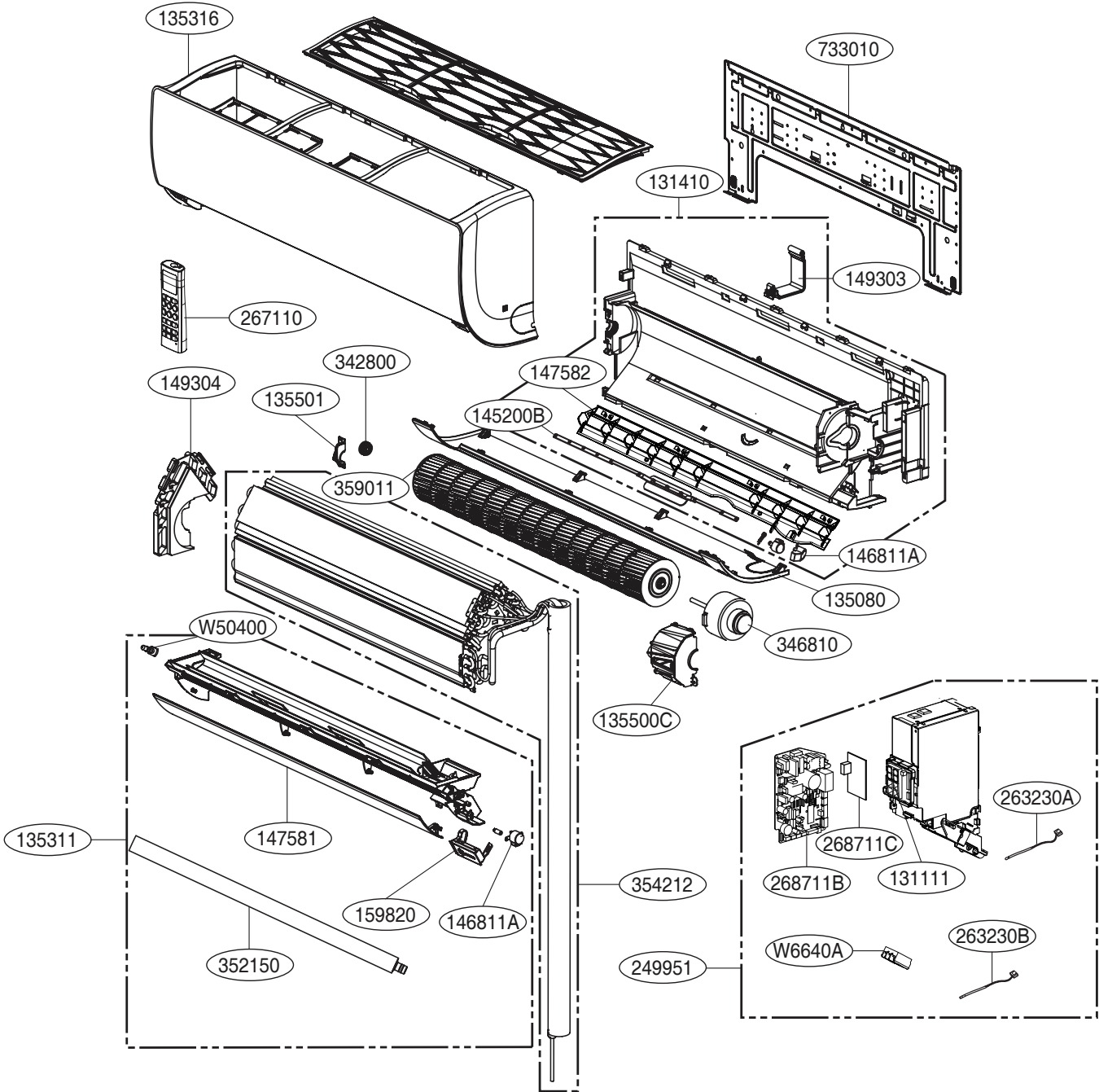


Outdoor Unit



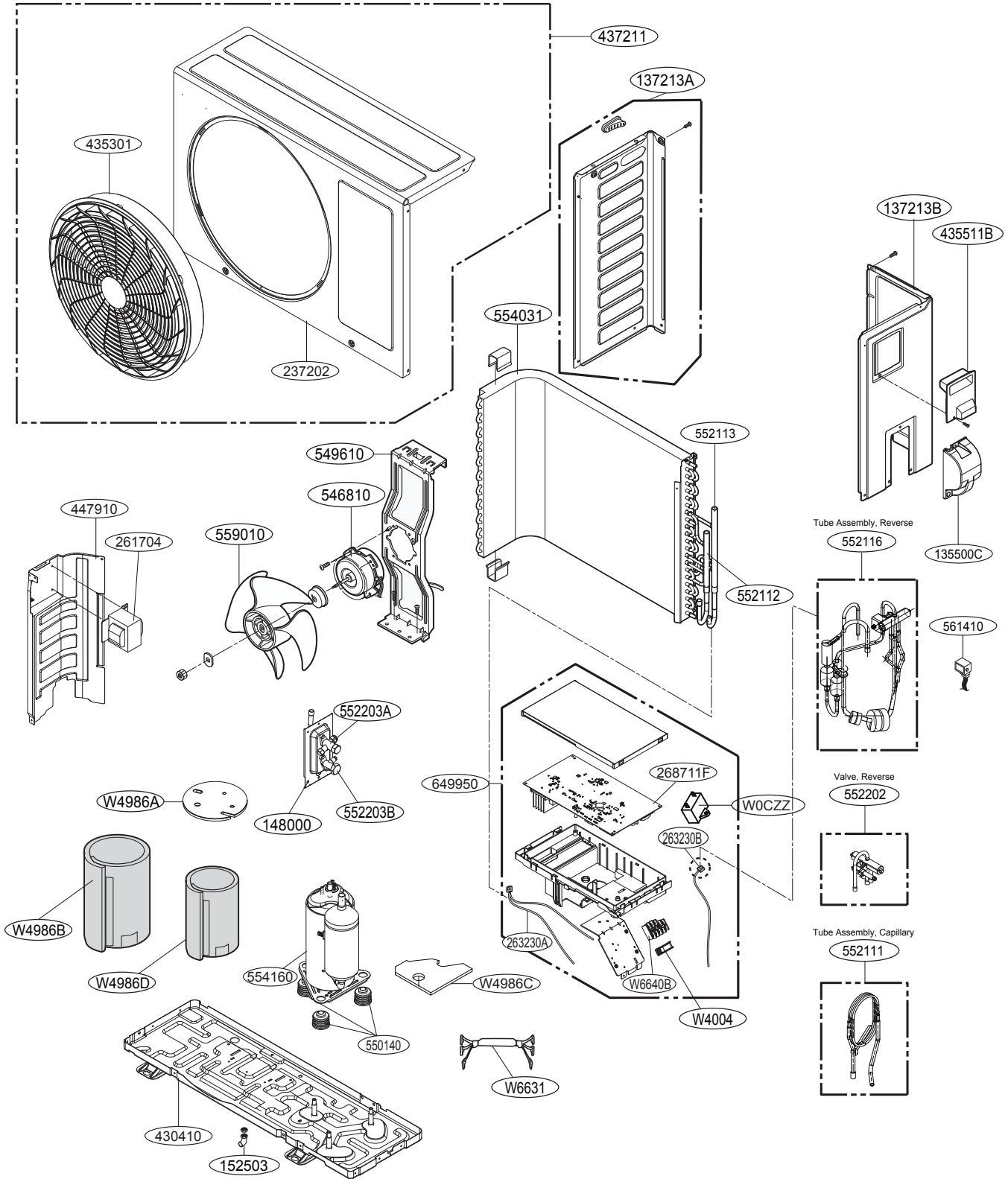
5. Exploded View

Indoor Unit



LOC.	Description	PCB Connector
263230A	Thermistor for indoor air temperature	CN-TH1 (INDOOR)
263230B	Thermistor for evaporator middle temperature	CN-TH3 (INDOOR)

Outdoor Unit



LOC.	Description	PCB Connector
263230A	Thermistor for condensing temperature	CN-TH1 (OUTDOOR)
	Thermistor for outdoor air temperature	
263230B	Thermistor for discharge pipe temperature	CN-TH2 (OUTDOOR)



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