



CONFIDENTIAL

# Room Air Conditioner

## **SVC MANUAL (Exploded View)**

**MODEL : S4-W09JA1ZD.EC6GERU (B09TS.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	B09TS.SSJ (B09TS.NSJ / B09TS.UA3) S4-W09JA1ZD (S4NW09JA1ZD / S4UW09JA1ZD)		
Capacity	Cooling	Min ~ Rated ~ Max	kW	0.88	2.70	3.46	
			Btu/h	3,000	9,212	11,800	
	Cooling (T3)	Min ~ Rated ~ Max	kJ/h	-	-	-	
			kW	-	-	-	
			Btu/h	-	-	-	
Power Input	Heating	Min ~ Rated ~ Max	kW	0.88	2.93	4.04	
			Btu/h	3,000	9,997	13,800	
	Heating -7 °C	Max	kJ/h	-	-	-	
			kW	-	-	-	
			W	140	729	1,400	
Running Current	Cooling (T3)	Min ~ Rated ~ Max	W	-	-	-	
			W	-	-	-	
	Heating	Min ~ Rated ~ Max	W	140	771	1,550	
	Cooling	Min ~ Rated ~ Max	A	0.70	3.50	6.50	
	Cooling (T3)	Min ~ Rated ~ Max	A	-	-	-	
EER	Heating	Min ~ Rated ~ Max	A	0.70	3.60	7.50	
			W/W	-	-	-	
			(Btu/h)/W	-	-	-	
			(kJ/h)/W	-	-	-	
			(Btu/h)/W	-	-	-	
SEER			-	-	18.50	-	
COP			-	-	3.80	-	
SCOP			-	-	12.97	-	
Energy Label Grade			Cooling / Heating	-	-	- / -	
Annual Energy Consumption			Cooling / Heating	-	-	- / -	
Power Supply			Ø, V, Hz	-	-	1, 220~240, 50	
Available Voltage Range			V	-	-	187 ~ 276	
Power Factor			%	-	-	94 / 94	
Moisture Removal			l/h	-	-	0.80	
Indoor	Air Flow Rate	Cooling, Max / H / M / L	m³/min	-	-	12.5 / 9.3 / 7.2 / 2.7	
		Heating, Max / H / M / L	m³/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)	-	-	59	
	Dimensions (W × H × D)	Net	mm	-	-	836.5×308.0×192.6	
		Shipping	mm	-	-	909×256×383	
Outdoor	Weight	Net	kg	-	-	8.5	
		Shipping	kg	-	-	10.7	
	Exterior Color Code		-	-	-	Munsell 7.5PB 0.2/20 (RAL 9005)	
	Air Flow Rate	Max	m³/min	-	-	27.0	
	Fan Motor Speed	Cooling, Min ~ Max	rpm	-	-	-	
		Heating, Min ~ Max	rpm	-	-	-	
	Sound Pressure Level	Cooling, Rated	dB(A)	-	-	51	
	Heating, Rated	dB(A)	-	-	53		
Indoor	Sound Power Level		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)	
Outdoor	Operation Range	Cooling	°C DB	-	-	18 ~ 48	
		Heating	°C DB	-	-	-5 ~ 24	
		Heating	°C WB	-	-	-5 ~ 18	
	Circuit Breaker		A	-	-	15	
	Power Supply Cable		No. × mm²	-	-	3 × 1	
	Power Supply to Unit		-	-	-	Outdoor	
	Power and Communication Cable		No. × mm²	-	-	4 × 0.75	
Piping	Size	Liquid	mm	-	-	ø 6.35	
		Gas	mm	-	-	ø 9.52	
Drain Hose Size	Connections Method	Indoor / Outdoor	mm	-	-	Flared / Flared	
		O.D. / I.D.	mm	-	-	21.5, 16.0	
Between Indoor & Outdoor	Piping Length	Min / Standard / Max	m	-	-	3.6 / 7.5 / 15	
	Max. Elevation Difference	No Charge	m	-	-	7.5	
	Piping Connection Heat Insulation		m	-	-	7	
Refrigerant			-	-	-	Both liquid and gas pipes	
	Type		-	-	-	R410A	
	Pre Charge		g	-	-	850	
	Additional Charge		g/m	-	-	20	
	Control		-	-	-	Capillary	
	Global Warning Potential		-	-	-	2087.5	
	t-CO <sub>2</sub> eq		-	-	-	1.77	
Defrost Method		-	-	-	-		
Tool Code (Chassis)	Indoor / Outdoor	-	-	-	-	SJ / UA3	
Compressor	Type		-	-	-	Twin Rotary	
	Model		-	-	-	GST102MAA	
	Motor Type		-	-	-	BLDC	
	Oil Type / Maker		-	-	-	POE (RB68A) / Sun Oil or Jx Nippon	
	Oil Charge		cc	-	-	280	
Fan(Indoor)	O.L.P. Name		-	-	-	-	
	Manufacturer / Country of Origin		-	-	-	LG Electronics / China	
	Type		-	-	-	Cross Flow Fan	
	Motor Output		W	-	-	30	
	Type		-	-	-	Propeller Fan	
Fan(Outdoor)	Motor Type		-	-	-	AC	
	Motor Output		W	-	-	25	
	Motor Insulation		-	-	-	Class E	
	Motor Enclosure / Ingress Protection		-	-	-	TEAO / IP43	
			-	-	-	Cu / Al	
Heat Exchanger	Evaporator	Material, Tube / Fin	-	-	-	(ø7 x 2 x 15 x 21FPI x 618) x 1	
		(ø × Row × Column × FPI/FPM × L) × Qty.	#1	-	-	-	
		(ø × Row × Column × FPI/FPM × L) × Qty.	#2	-	-	-	
		(ø × Row × Column × FPI/FPM × L) × Qty.	#3	-	-	-	
		(ø × Row × Column × FPI/FPM × L) × Qty.	#4	-	-	-	
	Condenser	Corrosion Protection	-	-	-	PCM	
		Fin Type	-	-	-	Slit	
		Material, Tube / Fin	-	-	-	Cu / Al	
		(ø × Row × Column × FPI/FPM × L) × Qty.	#1	-	-	(ø7 x 2 x 22 x 18FPI x 667) x 1	
		(ø × Row × Column × FPI/FPM × L) × Qty.	#2	-	-	-	
Heat Exchanger	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	B09TS
		S4-W09JA12D
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)	○ / ○
	Comfort Air	○
Air Purifying	Prefilter (Washable / Anti-Bacteria)	○
	Deodorizing Filter	X
	3M Micro Dust Filter	○
	3M Multi Protection Filter	X
	Plasma Air Purifier (Ionizer)	○
Installation	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 <sup>1</sup>	X
	Forced Operation	○
	Group Control <sup>1</sup>	X
	Sleep Mode	7hr
	Timer 24hr (On/Off) / 7hr (Off)	○ / X
	Timer (Weekly) <sup>1</sup>	X
	Two Thermistor Control <sup>1</sup>	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 Display	○
Energy Saving	Energy Saving	X
	Active Energy Control (Watt Option)	○
	Gen Mode	X
	Gen Mode	X
Individual Control	Wired Remote Controller (Premium) <sup>2</sup>	X
	Wired Remote Controller (Standard) <sup>2</sup>	X
	Wired Remote Controller (Simple with Mode Selection) <sup>2</sup>	X
	Wired Remote Controller (Simple without Mode Selection) <sup>2</sup>	X
	Handheld Wireless Controller	(See Remote Controller Section) AKB74955603
	Handheld Wireless Controller	Setting Temperature Range (Cooling) 18~30 °C (64~86 °F) Setting Temperature Range (Heating) 16~30 °C (60~86 °F)
CAC Network Function	General Central Controller (Non LGAP)	X
	Network Solution (LGAP)	○
	Dry Contact <sup>2</sup>	X
	PDI (Power Distribution Indicator) <sup>2</sup>	X
	Outdoor Unit PI 485 <sup>2</sup>	X
Special Function Kit	Wi-Fi <sup>2</sup>	Embedded
	Water Level Sensor Connection <sup>2</sup>	X
	Wind Baffle Kit <sup>2</sup>	X
	Sump Heater	X
	Sheath Heater <sup>2</sup>	X
	Crank Case Heater	X
	Smart Inverter Monitoring System (SIMs) <sup>2</sup>	X
Others	Mode Lock	X
	Temperature Control	Thermistor
	DRED (Demand Response Enabling Device)	X

### Note

○ : Applied, X : Not Applied

\* Filters are optional in some specific areas.

\* <sup>1</sup> : This function can be operated only when the wired remote controller is connected. The applicability of each function depends on the above table.

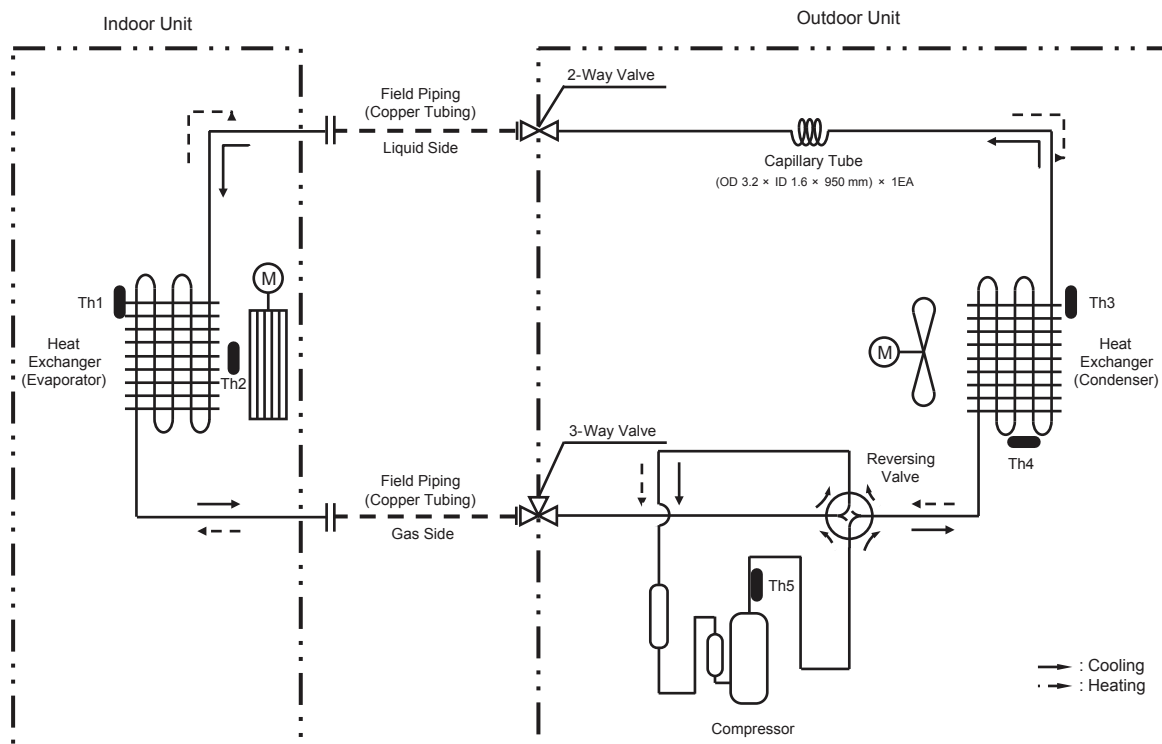
\* <sup>2</sup> : Optional accessories must be purchased separately. If shown as "Embedded", this function is included in product.

\* 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-W09JA1ZD



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)

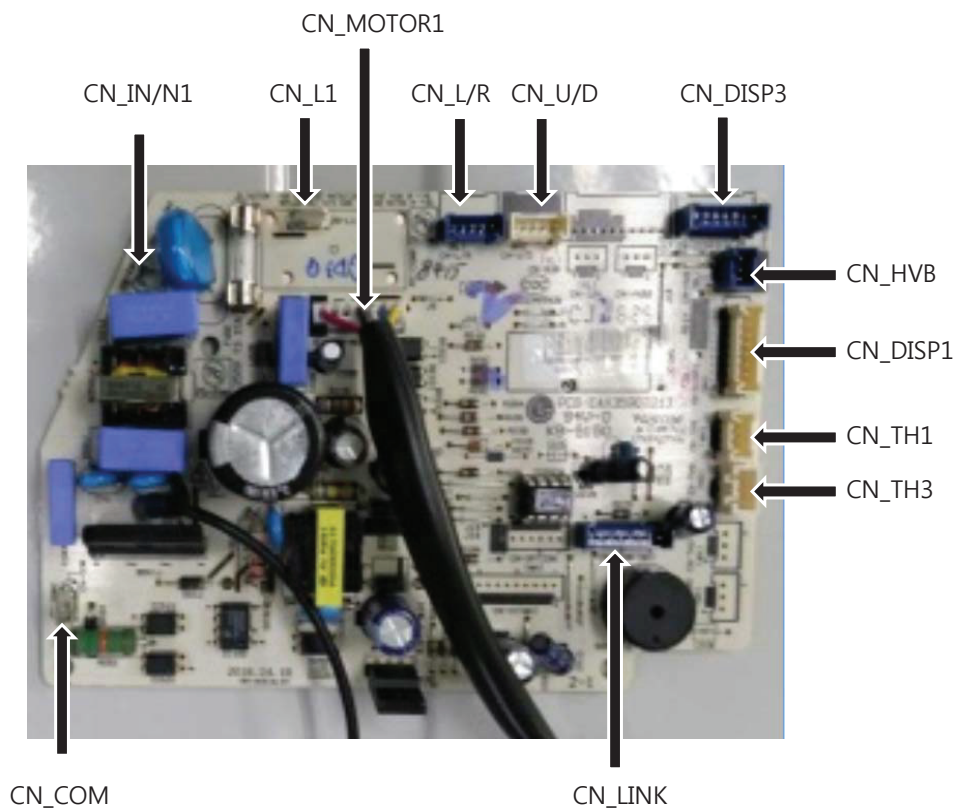
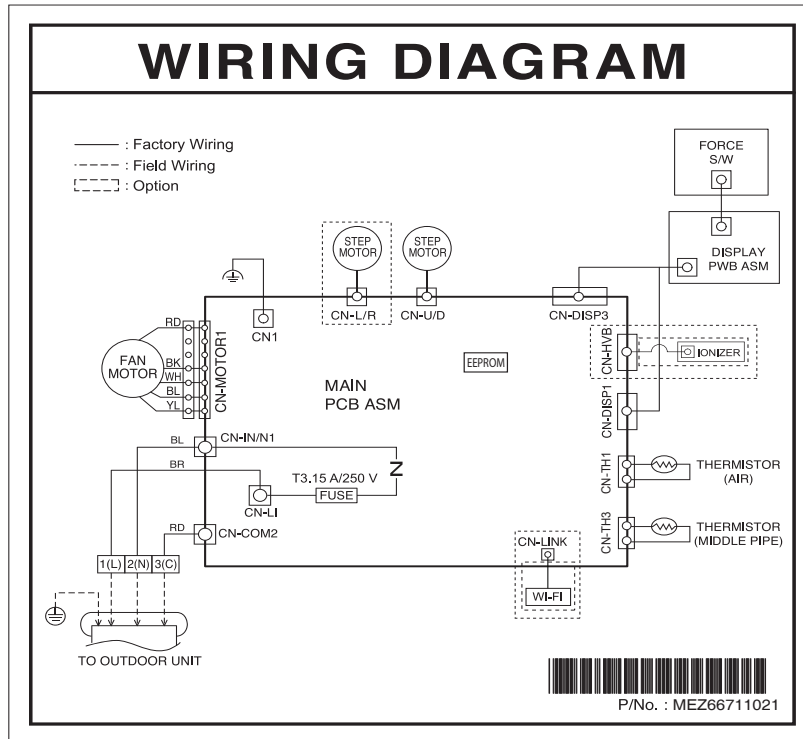
#### ■ Refrigerant Pipe Connection Port Diameters

Model	Gas		Liquid	
	mm	inch	mm	inch
S4-W09JA1ZD	Ø 9.52	Ø 3/8	Ø 6.35	Ø 1/4

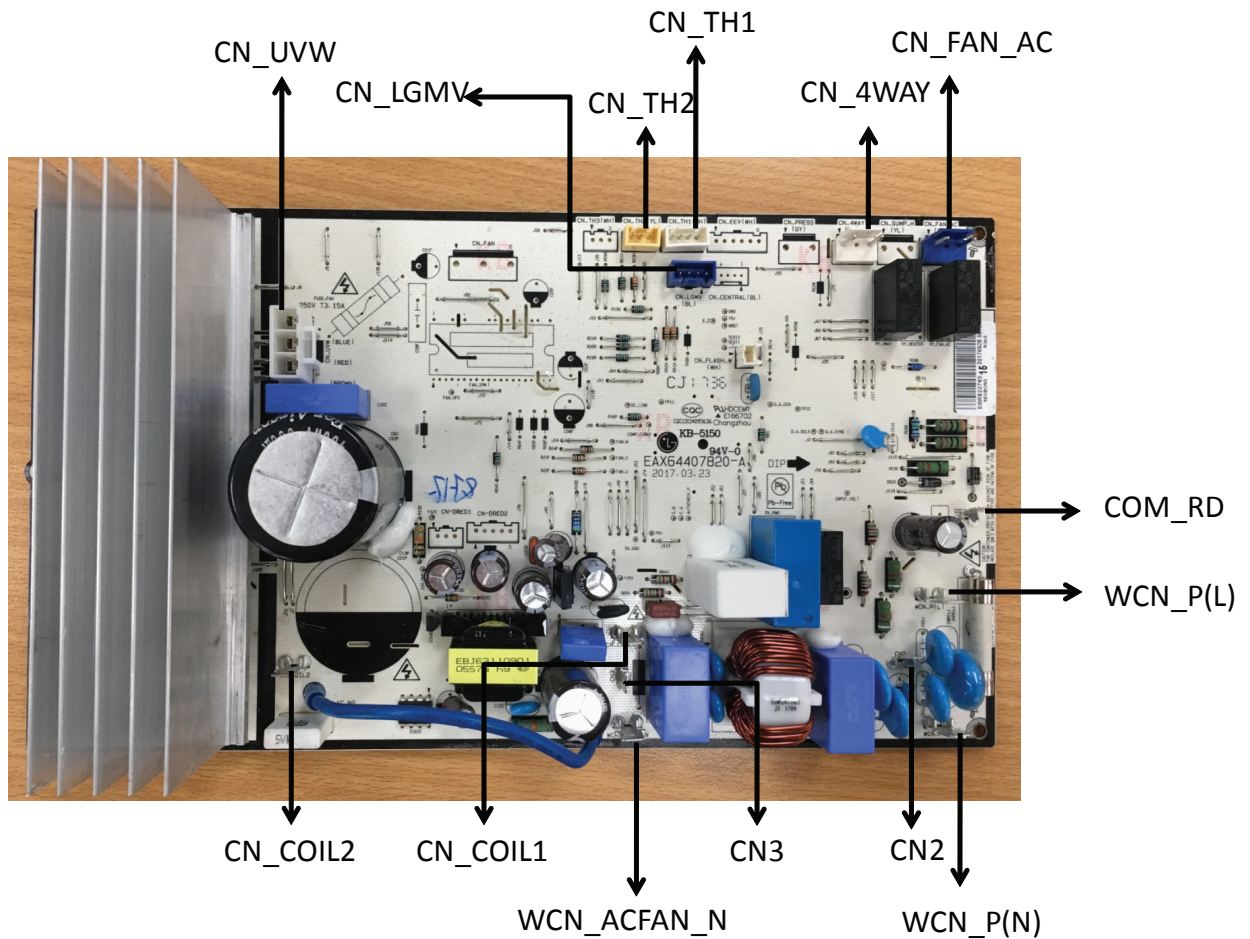
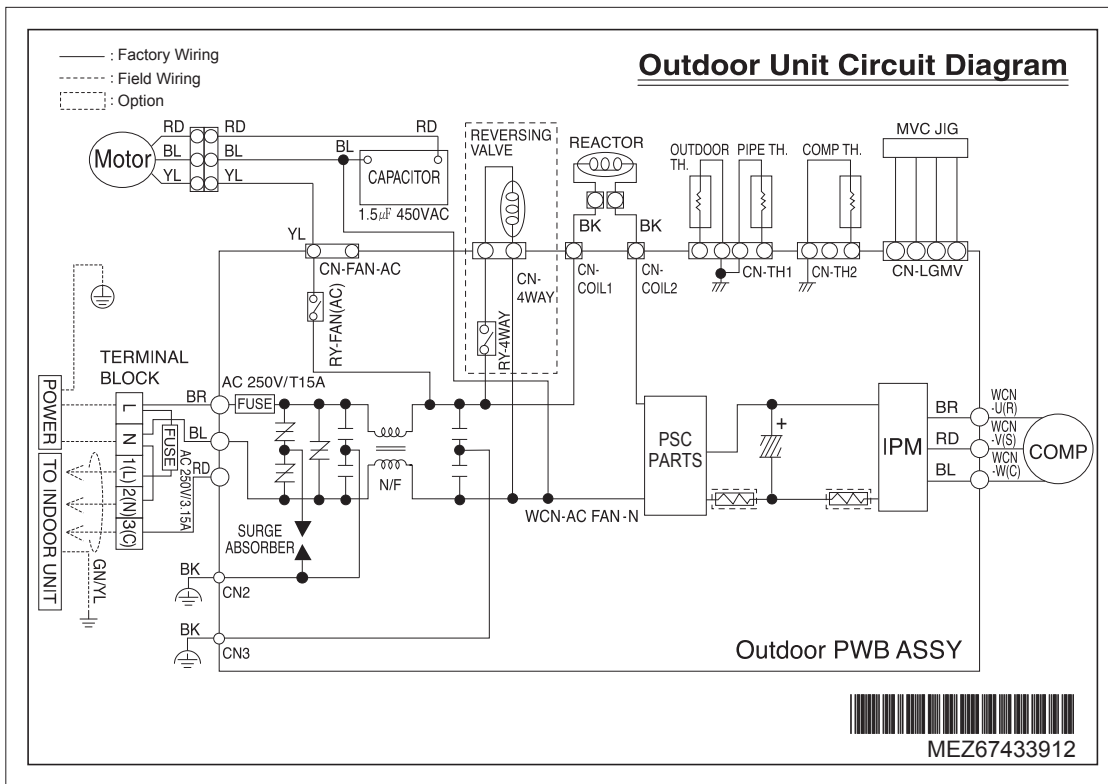
Appendix	Heat Exchanger	Propeller Fan	Cross Flow Fan	Compressor	Accumulator	4 Way Valve
	EEV (Electronic Expansion Valve)	Capillary Tube	2-Way Valve 3-Way Valve	Temperature Sensor	Pressure Sensor	Pressure Switch
	Check Valve	Flare Joint	Muffler	Strainer		

## 4. Wiring Diagrams

### Indoor Unit

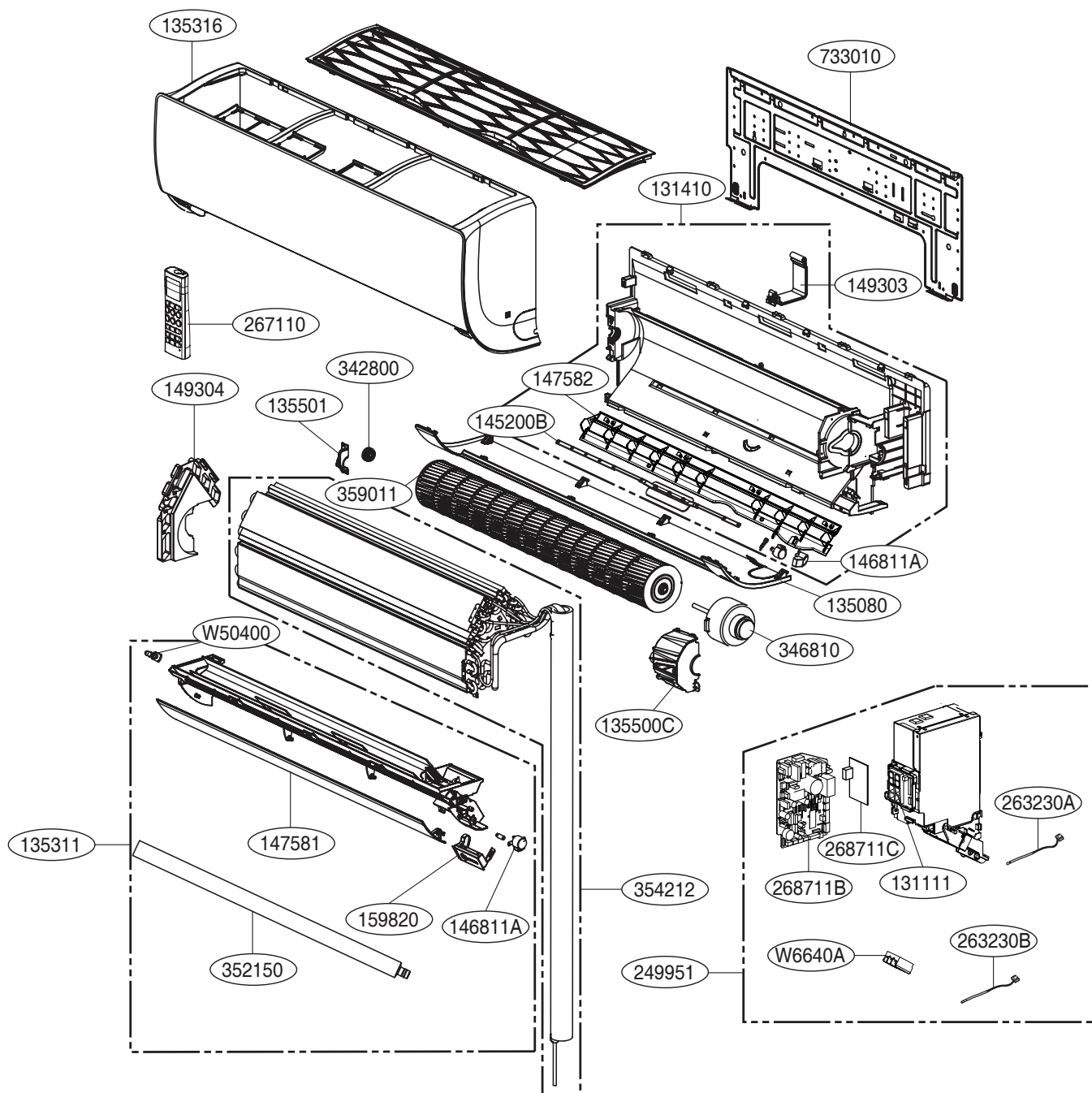


## Outdoor Unit



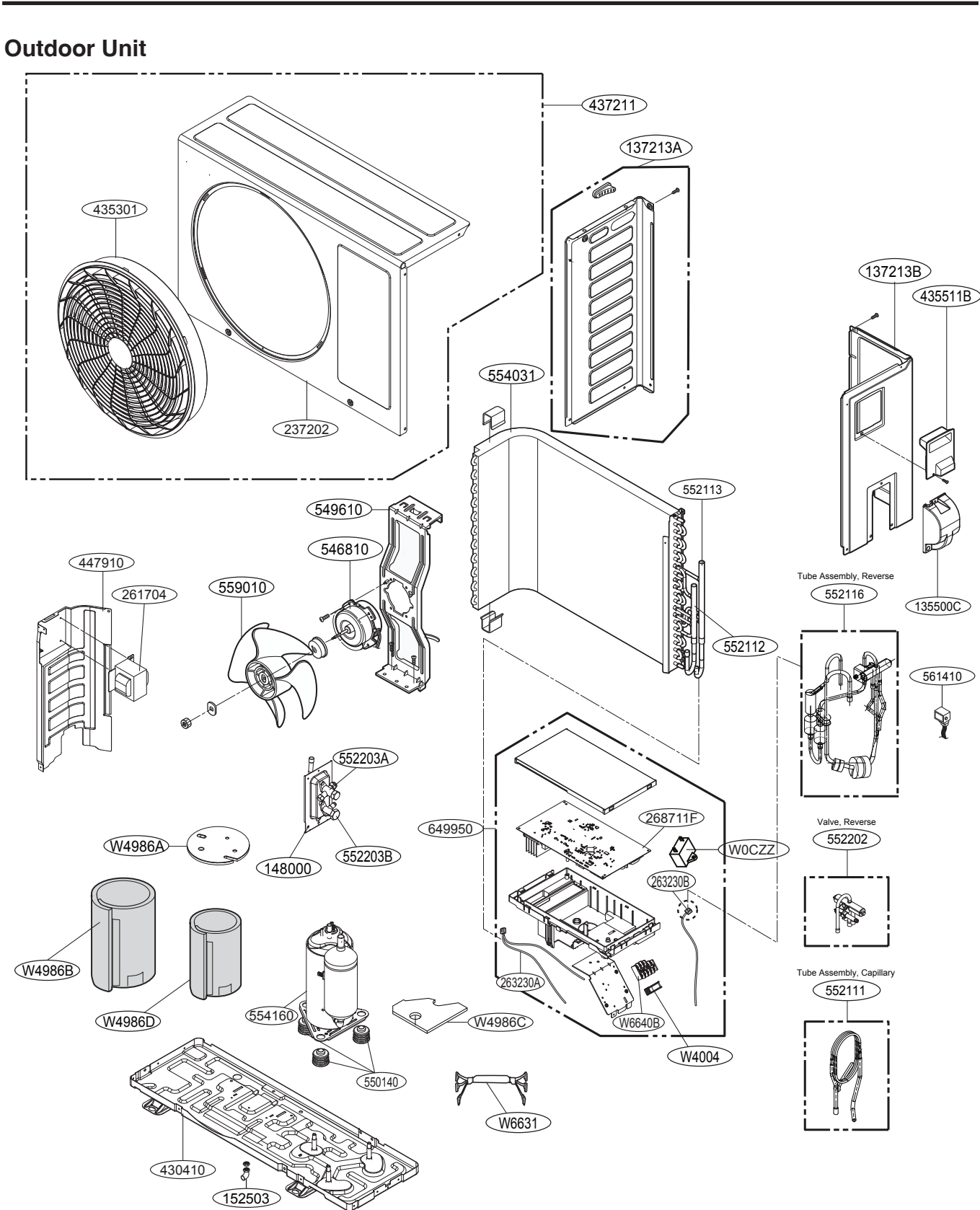
## 5. Exploded View

### Indoor Unit



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





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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