



Internal Use Only

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Room Air Conditioner

SVC MANUAL(Exploded View)

**MODEL : US-W093WSA5
US-W123BSA5**

CAUTION

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

Product Specifications

Buyer Model (Indoor Unit / Outdoor unit)		Unit	LS-090HEV1 (LSN090HEV1 / LSU090HEV1)	LS-120HEV1 (LSN120HEV1 / LSU120HEV1)	
Factory Model (Indoor Unit / Outdoor unit)			US-W093WSA5 (USNW093WSA5 / USUW093WS)	US-W123BSA5 (USNW123BSA5 / USUW123BSA)	
Cooling Capacity (Min ~ Rated ~ Max)		kW	0.90 ~ 2.49 ~ 2.78	0.30 ~ 3.52 ~ 4.03	
		Btu/h	3,070~8,500~9,500	1,020 ~ 12,000 ~ 13,780	
Heating Capacity (Min ~ Rated ~ Max)		kW	0.90 ~ 2.64 ~ 3.08	0.30 ~ 3.52 ~ 4.03	
		Btu/h	3,070~9,000~10,500	1,020 ~ 12,000 ~ 13,780	
Maximum Heating Capacity	Outdoor 17°F (Indoor 70°F)	Btu/h	5,570 (62%)	7,620 (63%)	
	Outdoor 5°F (Indoor 70°F)	Btu/h	-	-	
	Outdoor -4°F (Indoor 70°F)	Btu/h	-	-	
Power Input	Cooling / Heating	W	680/780	1,140/980	
Running Current	Cooling / Heating	A	3.2/3.6	5.2 / 4.4	
Starting Current	Cooling / Heating	A	3.2/3.6	5.2 / 4.4	
EER	-	-	12.50	10.52	
SEER	-	-	19.0	17.0	
COP	-	-	11.54	12.24	
HSPFE (IV / V) ^{a)}		-	9.0 / 7.82	9.2 / 8.0	
Power Supply	-	Ø / V / Hz	1 / 208-230 / 60	1 / 208-230 / 60	
Power Factor	-	%	92.4	95.3	
Air Flow Rate	Indoor,Max/H/M/L	CFM (m ³ /min)	318 (9) / 276 (8) / 226 (6) / 177 (5)	424 (12.0) / 353 (10.0) / 272 (8) / 212 (6)	
	Outdoor,Max	CFM (m ³ /min)	953 (27)	953 (27)	
Moisture Removal	-	pts/h (l/h)	2.12 (1.0)	2.76 (1.3)	
Sound Level	Indoor,H/M/L/SL (Cooling)	dB(A)+3	39 / 33 / 25 / 19	39 / 33 / 25 / 19	
	Indoor,H/M/L (Heating)	dB(A)+3	39 / 33 / 25	39 / 33 / 25	
	Outdoor,Max	dB(A)+3	47	47	
Compressor	Type	-	1P Rotary	1P Rotary	
	Model	-	GA102MDB	GA102MDB	
	Motor Type	-	Brushless DC Motor	Brushless DC Motor	
	Oil Type	-	PVE or POE	PVE or POE	
	Oil Charge	cc	310	310	
	O.L.P. name	-	-	-	
Fan(Indoor)	Type	-	Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	20	20	
Fan(Outdoor)	Type	-	Propeller Fan	Propeller Fan	
	Motor Type	-	BLDC	BLDC	
Motor Output	W	43	43		
Circuit Breaker*	-	A	15	15	
Power Supply Cable	No. × AWG	-	3 × 14	3 × 14	
Power and Transmission Cable	No. × AWG	-	4 × 18	4 × 18	
Piping Connections	Liquid Side	in (mm)	Φ 1/4 (6.35)	Φ 1/4 (6.35)	
	Gas Side	in (mm)	Φ 3/8 (9.52)	Φ 3/8 (9.52)	
Drain Hose(O.D. , I.D.)	in (mm)	27/32, 5/8 (21.5, 16.0)	27/32, 5/8 (21.5, 16.0)		
Dimensions	Indoor (W × H × D)	mm	756 × 265 × 184	885 × 285 × 210	
		inch	29-3/4 × 10-7/16 × 7-1/4	34-13/16 × 11-1/4 × 8-1/4	
	Outdoor (W × H × D)	mm	717 × 483 × 230	717 × 483 × 230	
		inch	28-1/4 × 19-1/32 × 9-1/16	28-1/4 × 19-1/32 × 9-1/16	
Net Weight	Indoor	lbs (kg)	16.3 (7.4)	22.5 (10.2)	
	Outdoor	lbs (kg)	61.7 (28)	61.7 (28)	
Gross Weight	Indoor	lbs (kg)	19.6 (8.9)	27.3 (12.4)	
	Outdoor	lbs (kg)	66.1 (30)	66.1 (30)	
Operation Range	Cooling (Outdoor)	°F (°C) DB	14 ~ 118 (-10 ~ 48)	14 ~ 118 (-10 ~ 48)	
	Heating (Outdoor)	°F (°C) DB	14 ~ 75 (-10 ~ 24)	14 ~ 75 (-10 ~ 24)	
Refrigerant & Charge	oz (g)	-	R410A / 30.0 (850)	R410A / 31.7 (900)	
Additional Refrigerant Charge	oz/ft (g/m)	-	0.22 (20)	0.22 (20)	
Piping Length (Min/Max)	ft (m)	-	9.8 (3) / 49.2 (15)	9.8 (3) / 49.2 (15)	
Chargeless	ft (m)	-	24.6 (7.5)	24.6 (7.5)	
Max. Elevation Difference	ft (m)	-	23 (7)	23 (7)	
Tool Code(Chassis)	Indoor + Outdoor	-	SW + UA3+	SB + UA3+	
Functions	Temperature Control	-	Thermistor	Thermistor	
	Allergy Safe filter	-	-	-	
	Plasma Filter	-	-	-	
	Prefilter (Washable/Anti-fungus)	O	-	O	
	3M Micro Protection filter	-	-	-	
	Auto Clean	O	-	O	
	Natural Wind (Auto Wind)	O	-	O	
	Steps, Fan/Cool/Heat	-	3 / 4 / 4	3 / 4 / 4	
	Airflow Direction Control(Up& Down)	-	Auto	Auto	
	Airflow Direction Control(Left & Right)	-	Manual	Manual	
	Remote Controller Type	-	Wireless LCD	Wireless LCD	
	Setting Temperature Range	Cooling[°F (°C)]	-	64~86 (18~30)	64~86 (18~30)
		Heating[°F (°C)]	-	60~86 (16~30)	60~86 (16~30)
	Auto Operation (Micom Control)	-	-	-	
	Auto Changeover (Micom Control)	O	-	O	
	Self Diagnosis	O	-	O	
	Timer	-	24h, On/Off	24h, On/Off	
	Sleep Operation	O	-	O	
	Soft Dry Operation	O	-	O	
	Restart Delay (Minute)	-	3	3	
	Deice Control (Defrost)	O	-	O	
	Hot Start	O	-	O	
	Jet Cool / Jet Heat	O	-	O	
	Low Ambient Operation	O	-	O	
	Special Function	-	Water Level Sensor	Water Level Sensor	

Note:

O : Applied, - : No relation

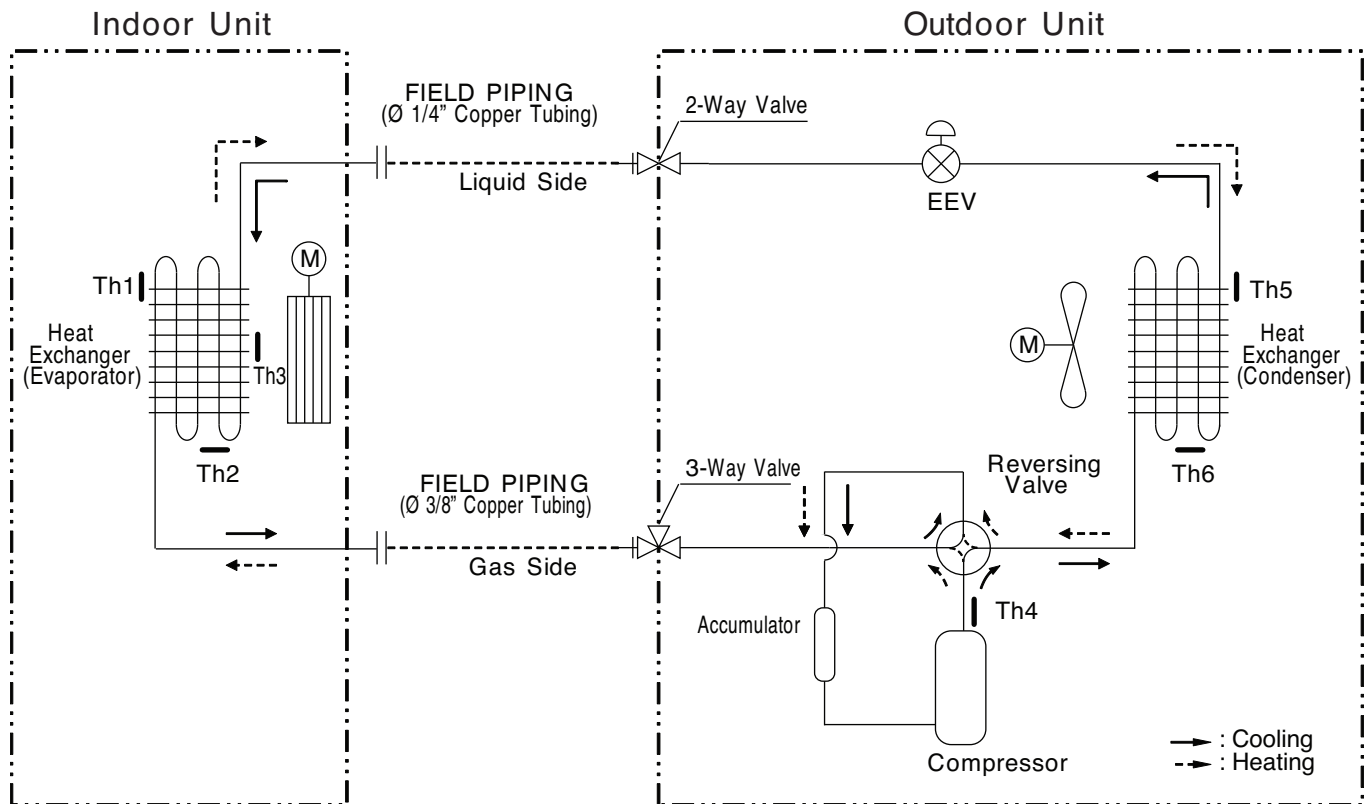
* For circuit breaker rating, please conform to local standards wherever necessary.

* Some of functions are slightly different depending upon models.

* The specification may be subject to change without notice for purpose of improvement.

Piping Diagrams

Model : US-W093WSA5 / US-W123BSA5

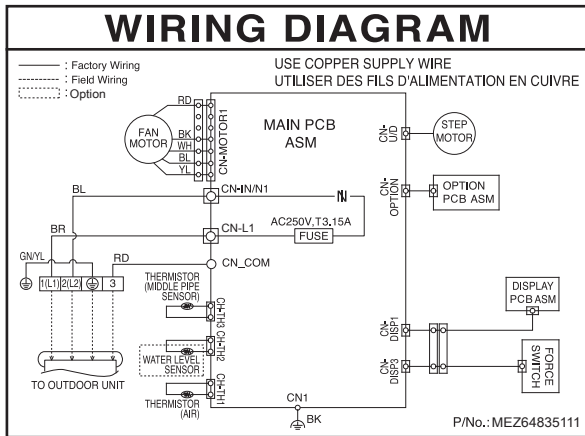


LOC	Description	PCB Connector
Th1	Thermistor for indoor air temperature	CH-TH1(Indoor)
Th2	Water level sensor (Option)	CH-TH2(Indoor)
Th3	Thermistor for evaporator middle temperature	CH-TH3(INDOOR)
Th4	Thermistor for discharge pipe temperature	CN-TH2(OUTDOOR)
Th5	Thermistor for outdoor air temperature	CN-TH1(OUTDOOR)
Th6	Thermistor for condensing temperature	

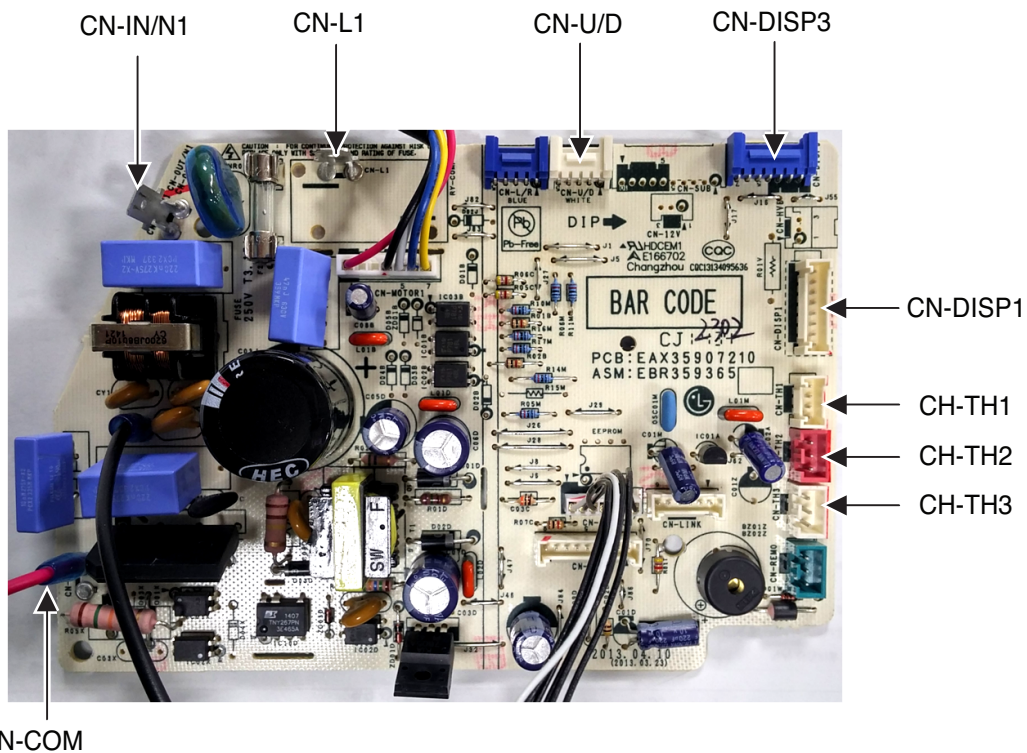
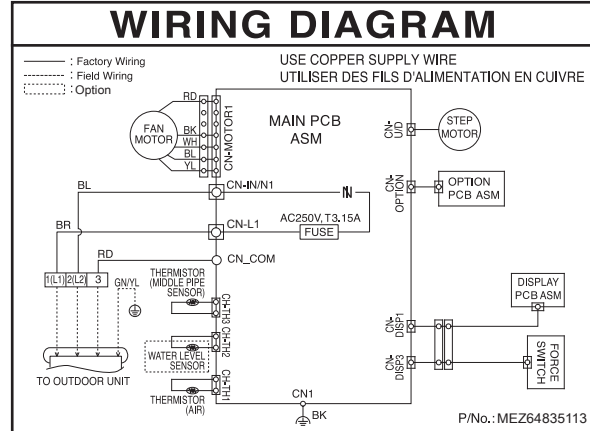
Wiring Diagrams

Indoor Unit

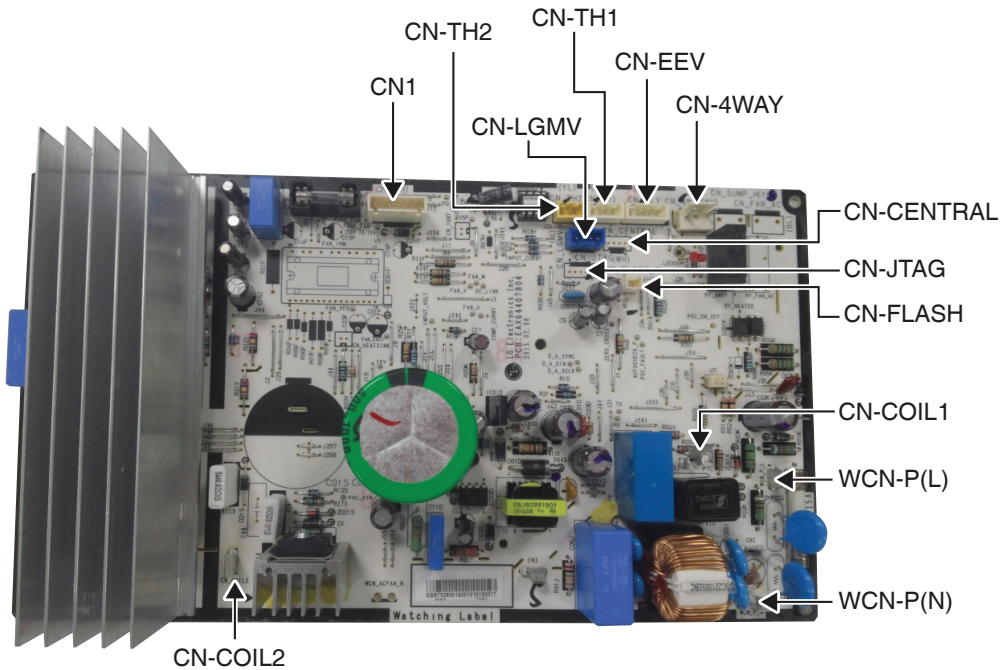
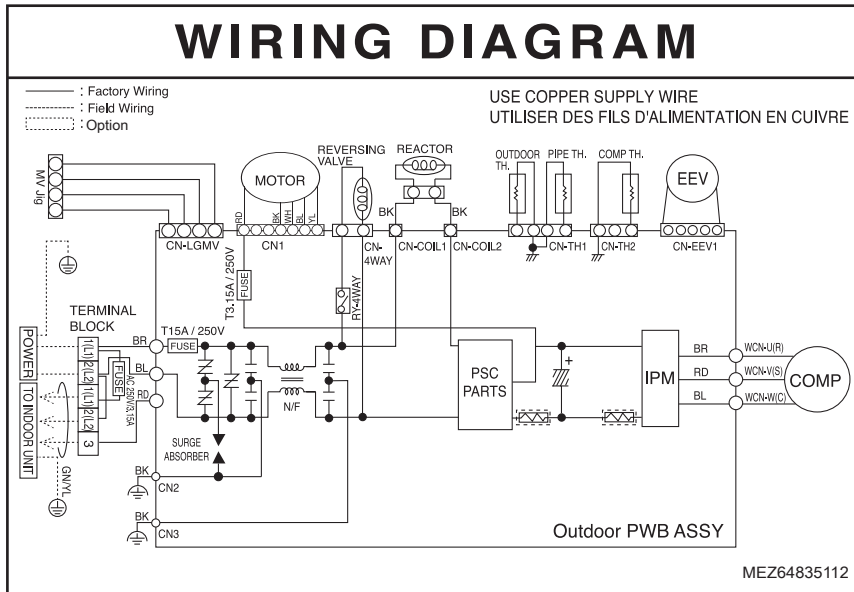
USNW093WSA5



USNW123BSA5



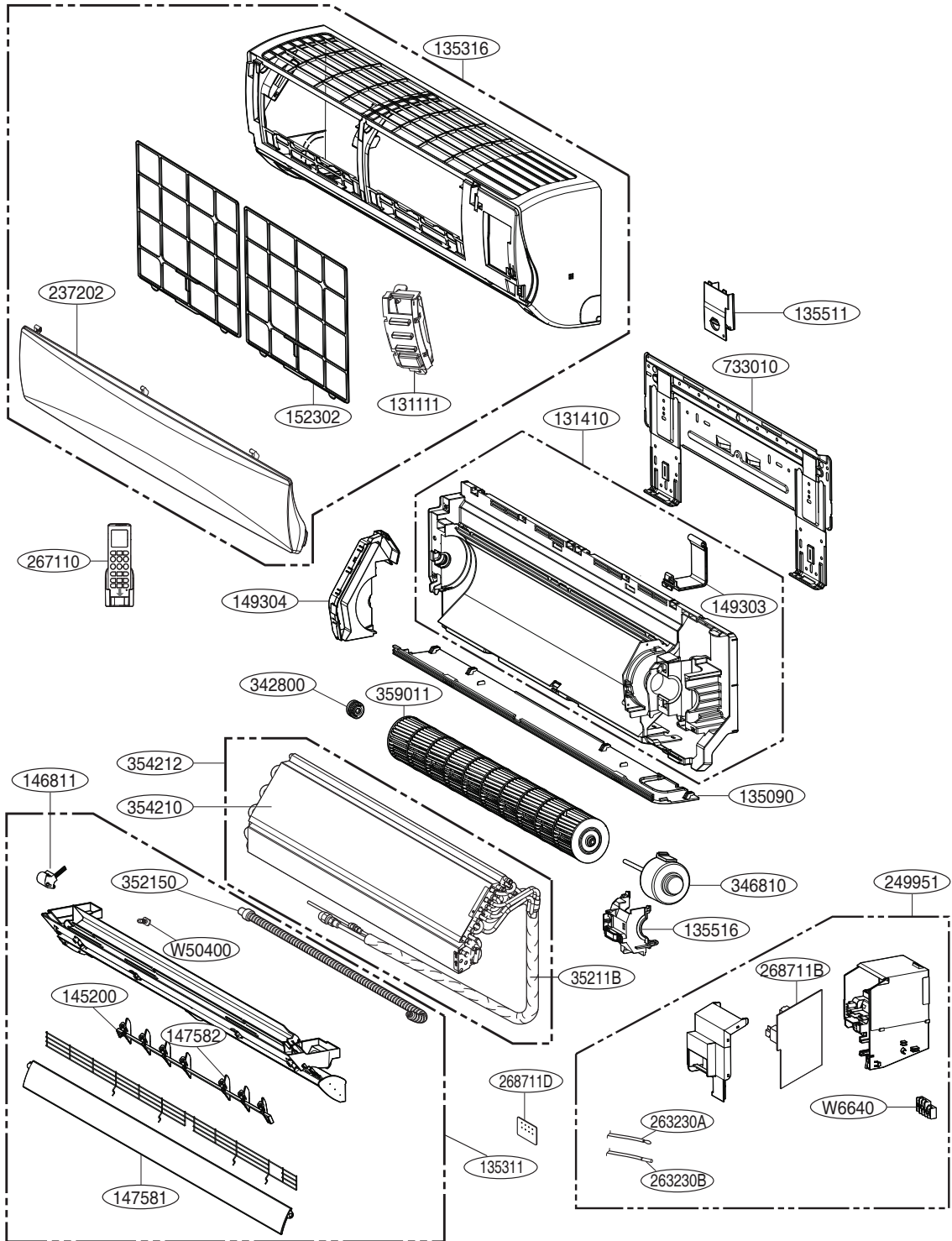
Outdoor Unit (USUW093WSA5 / USUW123BSA5)



Exploded View

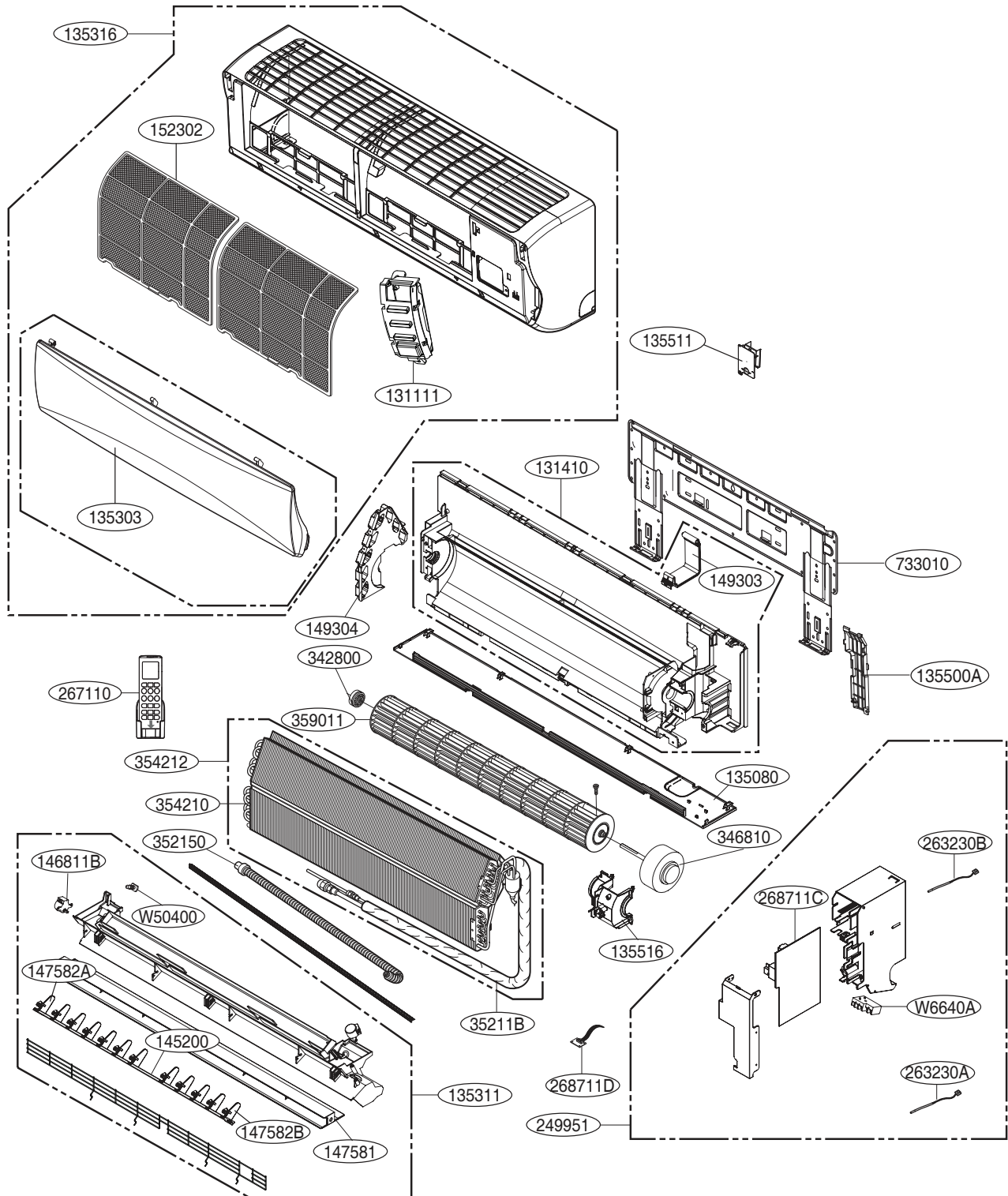
Indoor Unit

• Model: USNW093WSA5



LOC.	Description	PCB Connector
263230A	Thermistor for indoor air temperature	CN-TH1(Indoor)
263230B	Thermistor for evaporating temperature	CN-TH3(Indoor)

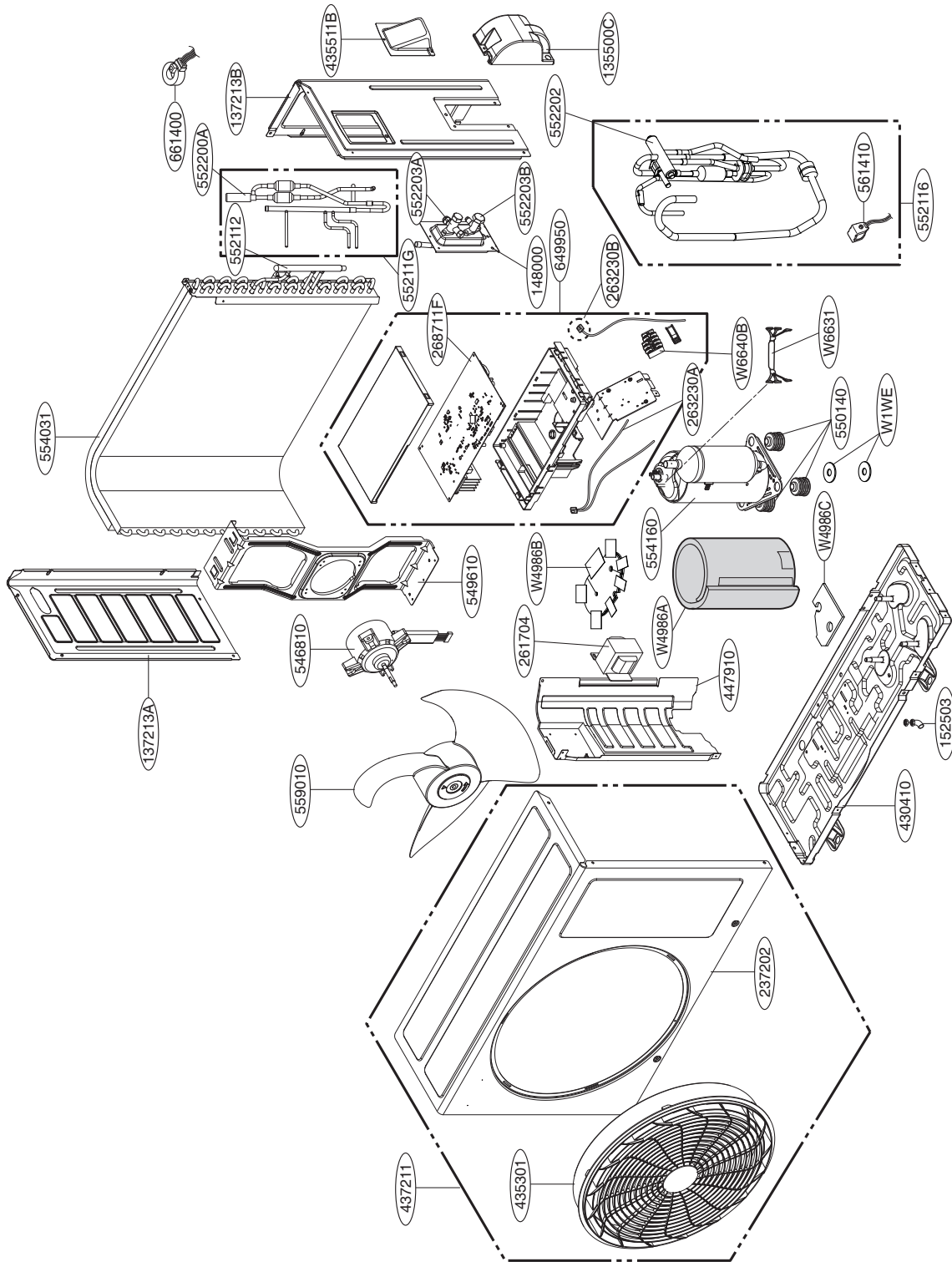
• Model : USNW123BSA5



LOC.	Description	PCB Connector
263230A	Thermistor for indoor air temperature	CN-TH1(Indoor)
263230B	Thermistor for evaporating temperature	CN-TH3(Indoor)

Outdoor Unit

• Model : USUW093WSA5 / USUW123BSA5



LOC.	Description
263230A	Thermistor for air temperature
	Thermistor for condenser middle temperature
263230B	Thermistor for discharge temperature



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