



CONFIDENTIAL

Room Air Conditioner

SVC MANUAL(Exploded View)

**MODEL : S4-W09M2MZA [H09AP]
S4-W12M2MZA [H12AP]**

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	S4-W12M2MZA / S4-W09M2MZA					
				H12AP.SSM / H09AP.SSM					
Capacity	Cooling	Min ~ Rated ~ Max	kW	0.3	3.5	4.04	0.30	2.50	4.00
			Btu/h	1,024	11,940	13,785	1,024	8,530	13,649
	Cooling (T3)	Min ~ Rated ~ Max	kW	-	-	-	-	-	-
			Btu/h	-	-	-	-	-	-
Power Input	Heating	Min ~ Rated ~ Max	kW	0.85	4	6.8	0.85	3.20	6.90
			Btu/h	2,900	13,650	23,203	2,900	10,919	23,544
	Heating -7 °C	Rated	kW	-	4.6	-	-	4.82	-
			W	-	833	1,400	-	490	1,400
Running Current	Cooling	Min ~ Rated ~ Max	W	-	785	1,700	-	593	1,700
			A	-	3.9	6	-	2.50	6.00
	Cooling (T3)	Rated	A	-	-	-	-	-	-
			A	-	3.7	7.4	-	2.90	7.40
EER			W/W	-	4.2	-	-	5.10	-
			(Btu/h)/W	-	14.33	-	-	17.40	-
EER (T3)			W/W	-	-	-	-	-	-
			(Btu/h)/W	-	-	-	-	-	-
SEER			-	-	9.1	-	-	9.40	-
COP			W/W	-	5.1	-	-	5.40	-
			(Btu/h)/W	-	17.39	-	-	18.43	-
SCOP			-	-	5.1	-	-	5.20	-
Energy Label Grade	Cooling / Heating		-	-	A+++ / A+++	-	-	A+++ / A+++	-
Annual Energy Consumption	Cooling / Heating		kWh/year	-	135 / 1,045	-	-	94 / 862	-
Power Supply			Ø, V, Hz	-	1, 220-240, 50	-	-	1, 220-240, 50	-
Available Voltage Range			V	-	187 ~ 276	-	-	187 ~ 276	-
Power Factor	Cooling / Heating		%	-	96.0 / 96.0	-	-	96.0 / 96.0	-
Moisture Removal			l/h	-	1.7	-	-	1.7	-
Indoor	Air Flow Rate	Cooling, Max / H / M / L	m ³ /min	-	12.4 / 11.1 / 8.7 / 6.6	-	-	12.4 / 11.1 / 8.7 / 6.6	-
		Heating, Max / H / M / L	m ³ /min	-	14.3 / 11.1 / 8.7 / 6.6	-	-	14.3 / 11.1 / 8.7 / 6.6	-
	Sound Pressure Level	Cooling, Max / H / M / L / SL	dB(A)	-	40 / 35 / 27 / 19	-	-	42 / 37 / 29 / 19	-
		Heating, Max / H / M / L	dB(A)	-	40 / 35 / 27	-	-	42 / 37 / 29	-
	Sound Power Level		dB(A)	-	60	-	-	60	-
	Dimensions (W × H × D)	Net	mm	-	875 × 295 × 235	-	-	875 × 295 × 235	-
		Shipping	mm	-	930 × 358 × 285	-	-	930 × 358 × 285	-
	Weight	Net	kg	-	11	-	-	11.0	-
		Shipping	kg	-	13.5	-	-	13.5	-
	Exterior Color Code			-	Munsell 7.5BG 10/2 (RAL 9016)	-	-	Munsell 7.5BG 10/2 (RAL 9016)	-
Outdoor	Air Flow Rate	Max	m ³ /min	-	49	-	-	49.0	-
	Sound Pressure Level	Cooling, Rated	dB(A)	-	48	-	-	48	-
		Heating, Rated	dB(A)	-	50	-	-	50	-
	Sound Power Level		dB(A)	-	65	-	-	65	-
	Dimensions (W × H × D)	Net	mm	-	870 × 650 × 330	-	-	870 × 650 × 330	-
		Shipping	mm	-	1026 × 693 × 446	-	-	1026 × 693 × 446	-
	Weight	Net	kg	-	42.5	-	-	41.5	-
		Shipping	kg	-	47	-	-	45.5	-
	Max. Fuse Size		A	-	15	-	-	15	-
	Exterior Color Code			-	Munsell 9.54Y 8.34/1.31 (RAL 9001)	-	-	Munsell 9.54Y 8.34/1.31 (RAL 9001)	-
Operation Range	Cooling	°C DB	-	-10 ~ 48	-	-	-10 ~ 48	-	
	Heating	°C WB	-	-25 ~ 18	-	-	-25 ~ 18	-	
Compressor	Type		-	Twin Rotary	-	-	Twin Rotary	-	
	Model		-	GAT134MCA	-	-	GAT134MCA	-	
	Motor Type		-	BLDC	-	-	BLDC	-	
	Oil Type		-	POE (RB68A) / Sun Oil or Jx Nippon, PVE (FVC68D) / IDEMITSU	-	-	POE (RB68A) / Sun Oil or Jx Nippon, PVE (FVC68D) / IDEMITSU	-	
	Oil Charge		cc	360±5cc	-	-	360±5cc	-	
	O.L.P. Name		-	-	-	-	-	-	
	Manufacturer / Country of Origin		-	LG Electronics / China	-	-	LG Electronics / China	-	
Fan(Indoor)	Type		-	Cross Flow Fan	-	-	Cross Flow Fan	-	
	Motor Output		W	30	-	-	30	-	
Fan(Outdoor)	Type		-	Propeller Fan	-	-	Propeller Fan	-	
	Motor Type		-	BLDC	-	-	BLDC	-	
	Motor Output		W	85	-	-	85	-	
	Motor Insulation		-	Class E	-	-	Class E	-	
	Motor Enclosure / Ingress Protection		-	TEAO / IPX4	-	-	TEAO / IPX4	-	
Heat Exchanger	Evaporator	Material, Tube / Fin	-	Cu / Al	-	-	Cu / Al	-	
		Fin Spacing	FPI	22/20	-	-	22/20	-	
		Corrosion Protection	-	PCM	-	-	PCM	-	
	Condenser	Material, Tube / Fin	-	Cu / Al	-	-	Cu / Al	-	
		Fin Spacing	FPI/FPDM	18 FPI	-	-	18 FPI	-	
	Corrosion Protection	-	Gold	-	-	Gold	-		
Circuit Breaker			A	15	-	-	15	-	
Power Supply Cable			No. × mm ²	3 × 1	-	-	3 × 1	-	
Power Supply to Unit			-	Outdoor	-	-	Outdoor	-	
Power and Transmission Cable			No. × mm ²	4 × 1.0	-	-	4 × 1.0	-	
Piping	Size	Liquid	mm	Ø 6.35	-	-	Ø 6.35	-	
		Gas	mm	Ø 9.52	-	-	Ø 9.52	-	
Connections Method			-	Flared / Flared	-	-	Flared / Flared	-	
Drain Hose Size			mm	21.0, 15.5	-	-	21.0, 15.5	-	
Between Indoor & Outdoor	Piping Length	Min / Standard / Max	m	3 / 7.5 / 20	-	-	3 / 7.5 / 20	-	
		No Charge	m	7.5	-	-	7.5	-	
	Max. Elevation Difference		m	10	-	-	10	-	
Refrigerant	Type		-	R410A	-	-	R410A	-	
	Pre Charge		g	1150	-	-	1150	-	
	Additional Charge		g/m	20	-	-	20	-	
	Control		-	Electronic Expansion Valve	-	-	Electronic Expansion Valve	-	
Defrost Method			-	Reverse Cycle	-	-	Reverse Cycle	-	
Tool Code (Chassis)	Indoor / Outdoor		-	SM / U24A	-	-	SM / U24A	-	

Note

- : No Relation
- For Circuit Breaker Rating, please conform to local standards whenever necessary.
- Exterior color code is approximate value.
- Due to our policy of innovation some specifications may be changed without notifications.

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

2. Function

Category	Function	H12AP.SSM / H09AP.SSM		
		S4-W12M2MZA / S4-W09M2MZA		
Air Flow	Air Supply Outlet	1		
	Airflow Direction Control (Left & Right)	5 Steps		
	Airflow Direction Control (Up & Down)	6 Steps		
	Auto Swing (Left & Right)	0		
	Auto Swing (Up & Down)	0		
	Fan Speed Steps (Fan / Cool / Heat)	6 / 6 / 6		
	Natural Wind (Auto Wind)	0		
	Jet Cool / Jet Heat (Power Wind)	0 / 0		
Air Purifying	Comfort Air	0		
	Pre-filter (Washable / Anti-Bacteria)	0		
	Deodorizing Filter (Triple)	X		
	3M Micro Dust Filter	0		
	3M Multi Protection Filter	X		
Installation	Plasma Air Purifier	0		
	Drain Pump	X		
Reliability	Hot Start	0		
	Self Diagnosis	0		
	De-ice Control (Defrost)	0		
	Dry (Dehumidification) Operation	0		
Convenience	Auto Changeover	0		
	Auto Operation (Artificial Intelligence)	X		
	Auto Cleaning (Coil Dry)	0		
	Auto Restart Operation	0		
	Child Lock ¹	0		
	Forced Operation	0		
	Group Control ¹	X		
	Sleep Mode	7hr		
	Timer 24hr (On/Off)	0		
	Timer (Weekly) ¹	0		
	Two Thermistor Control ¹	0		
	Low Ambient Operation	0		
	Overheating Protection	0		
	Low Heating	0		
	Voice Control	X		
	Smart Scan (PIR)	X		
	LG AC Tag On (NFC)	X		
	Outdoor Silent Mode	X		
	Mosquito Away	X		
	Smart Diagnosis	0		
Indoor Unit Display Type	Number Display			
Indoor Unit Display Light	On/Off			
Energy Saving	Energy Display	0		
Energy Saving	Energy Saving	0		
	Active Energy Control (Watt Option)	X		
	Gen Mode	X		
Individual Control	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)	AKB74955602	
		Setting Temperature Range (Cooling)	18~30 °C	
CAC Network Function	Setting Temperature Range (Heating)	16~30 °C		
	General Central Controller (Non LGAP)	X		
	Network Solution (LGAP)	X		
	Dry Contact ²	X		
	PDI (Power Distribution Indicator) ²	X		
Special Function Kit	Outdoor Unit PI 485 ²	X		
	Wi-Fi ²	0		
	Water Level Sensor Connection ²	X		
	Wind Baffle Kit ²	X		
	Sump Heater	0		
	Sheath Heater	X		
	Crank Case Heater	0		
Smart Invert Monitoring System (SIMS) ²	PSWMOZ3			
Others	Mode Lock	X		
	Temperature Control	Thermistor		
	DRED (Demand Response Enabling Device)	X		

Note

O : Applied, X : Not available

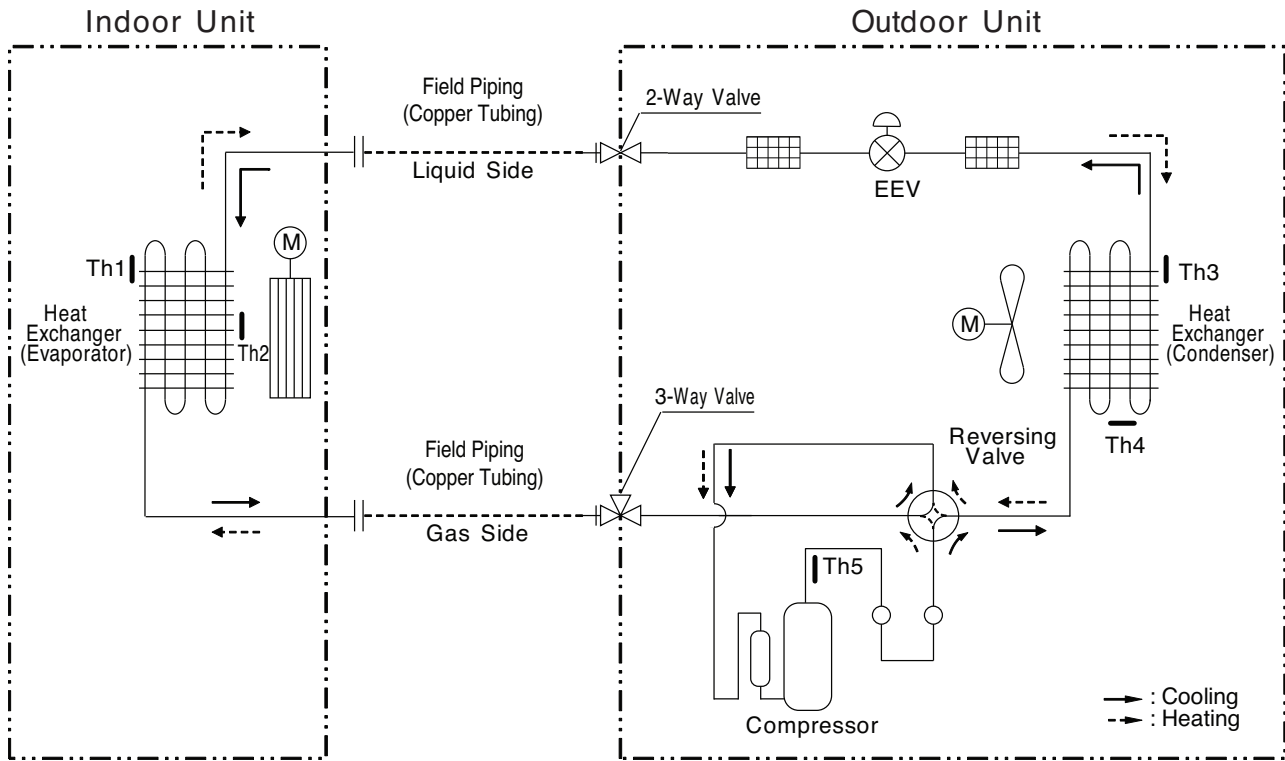
[•] Filters are optional in some specific areas.

^{•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.

3. Refrigerant Cycle Diagram

Model : F09MK, F12MK



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)

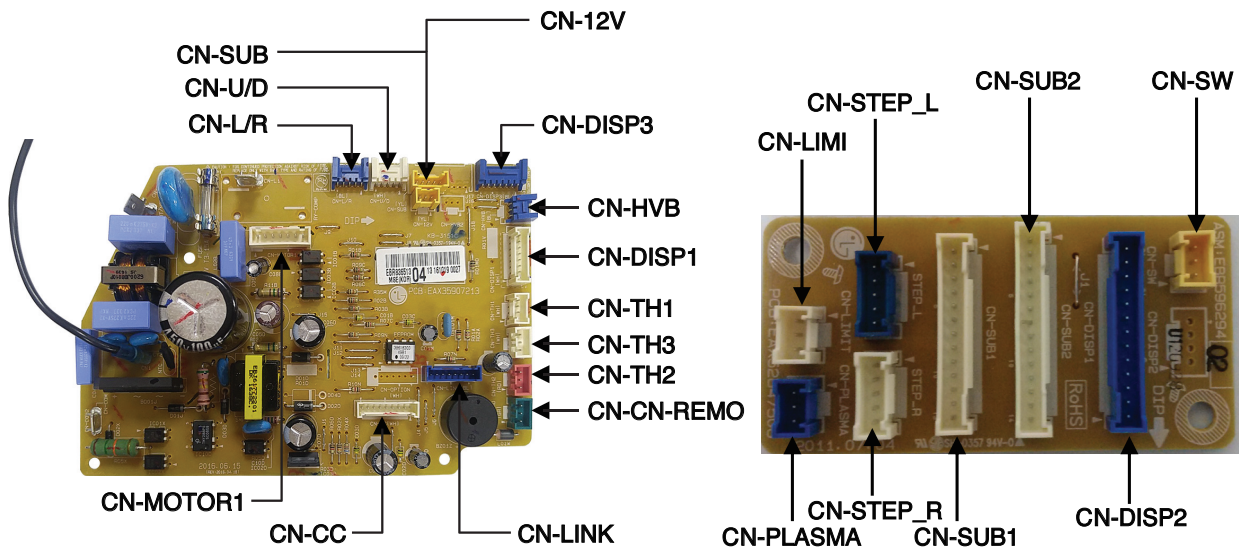
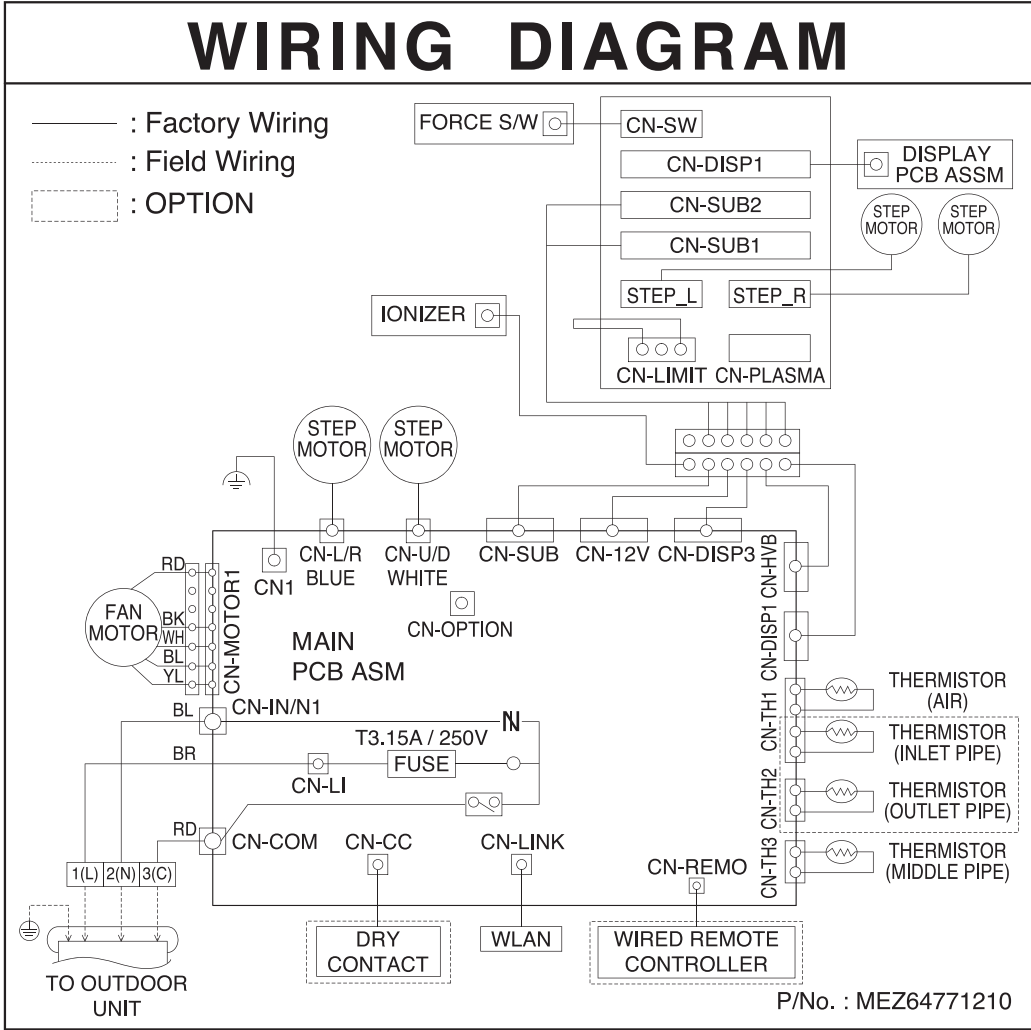
Refrigerant Pipe Connection Port Diameters

Model	Gas		Liquid	
	mm	inch	mm	inch
F09MK, F12MK	Ø 9.52	Ø 3/8	Ø 6.35	Ø 1/4

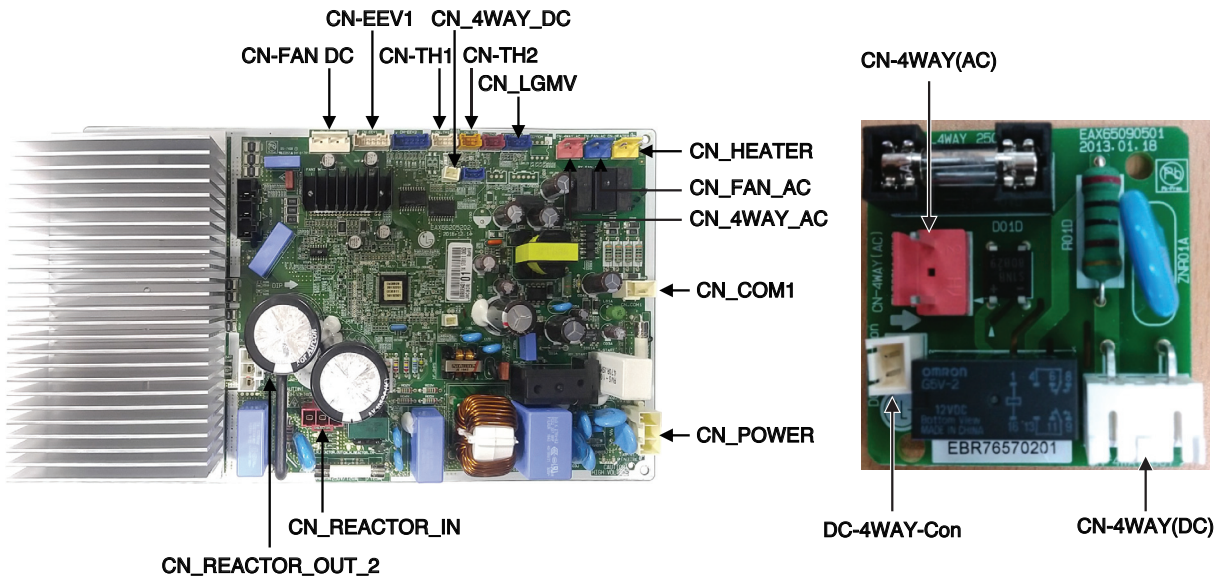
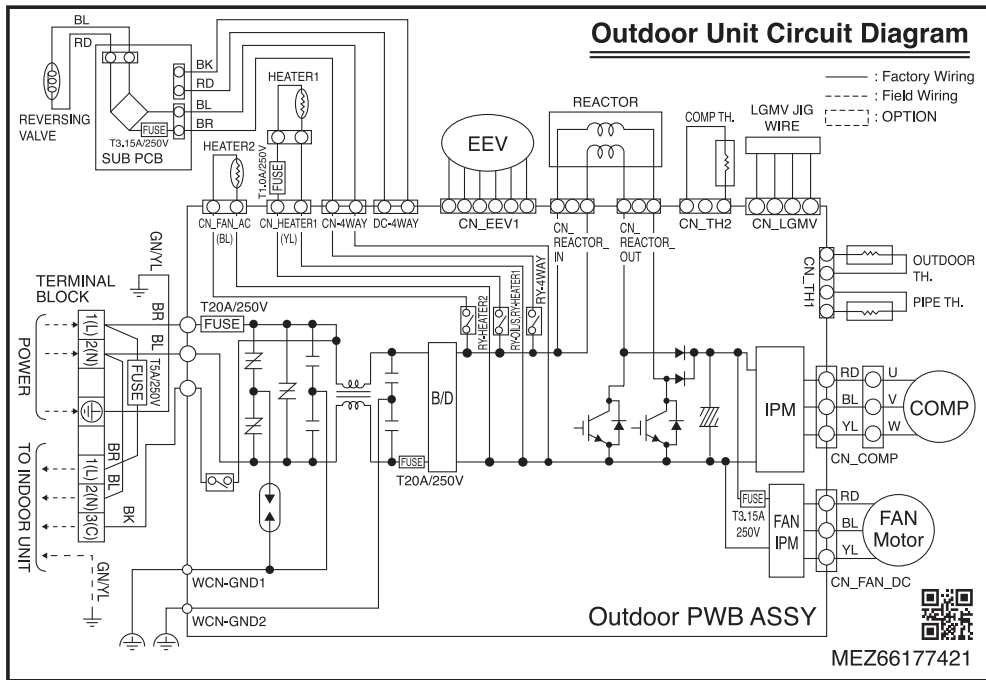
Appendix	Heat Exchanger	Propeller Fan	Cross Flow Fan	Compressor	Accumulator	4 Way Valve
	EEV (Electronic Expansion Valve)	Capillary Tube	2-Way Valve 3-Way Valve	Temperature Sensor	Pressure Sensor	Pressure Switch
	Check Valve	Flare Joint	Muffler	Strainer		

4. Wiring Diagrams

Indoor Unit

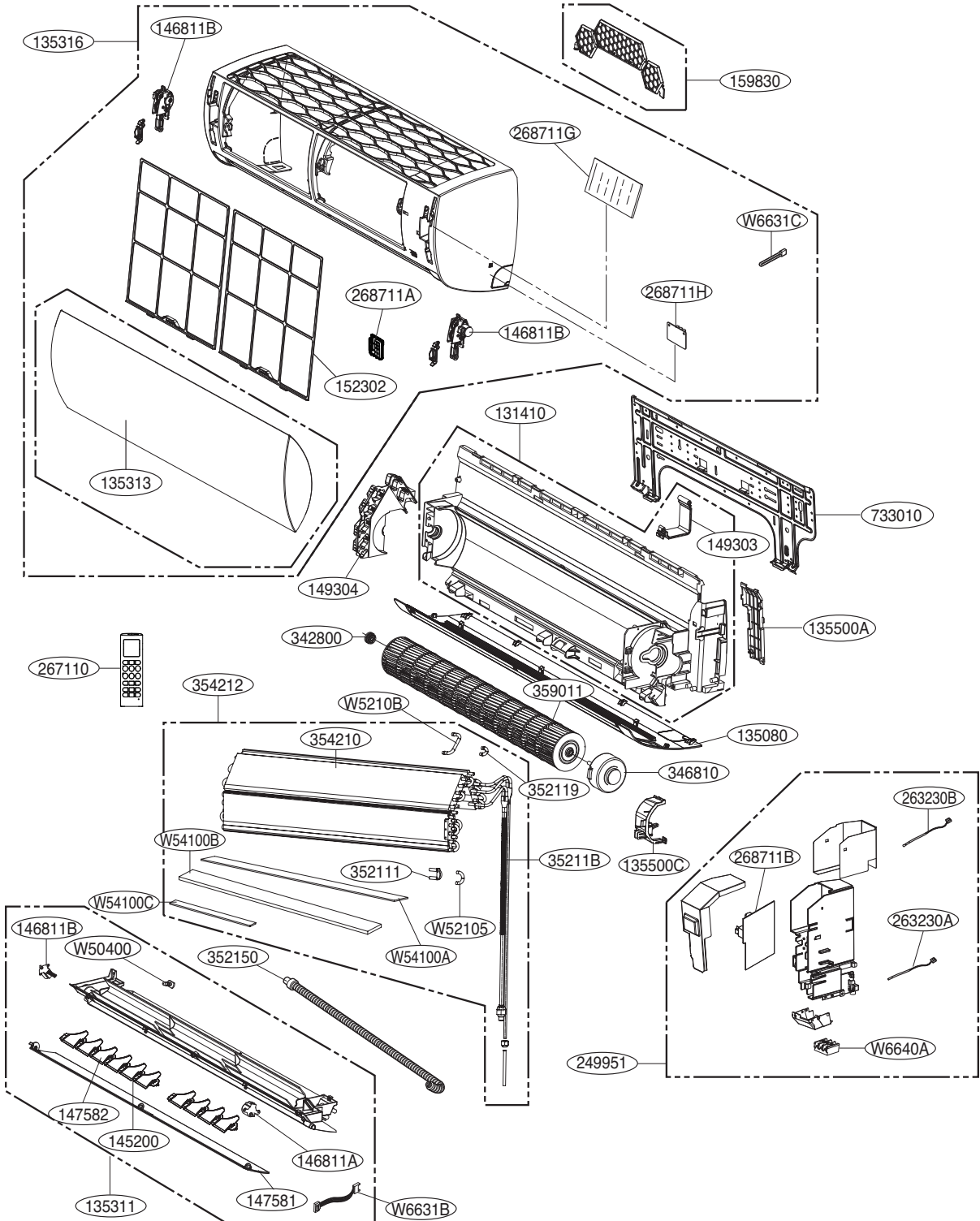


Outdoor Unit



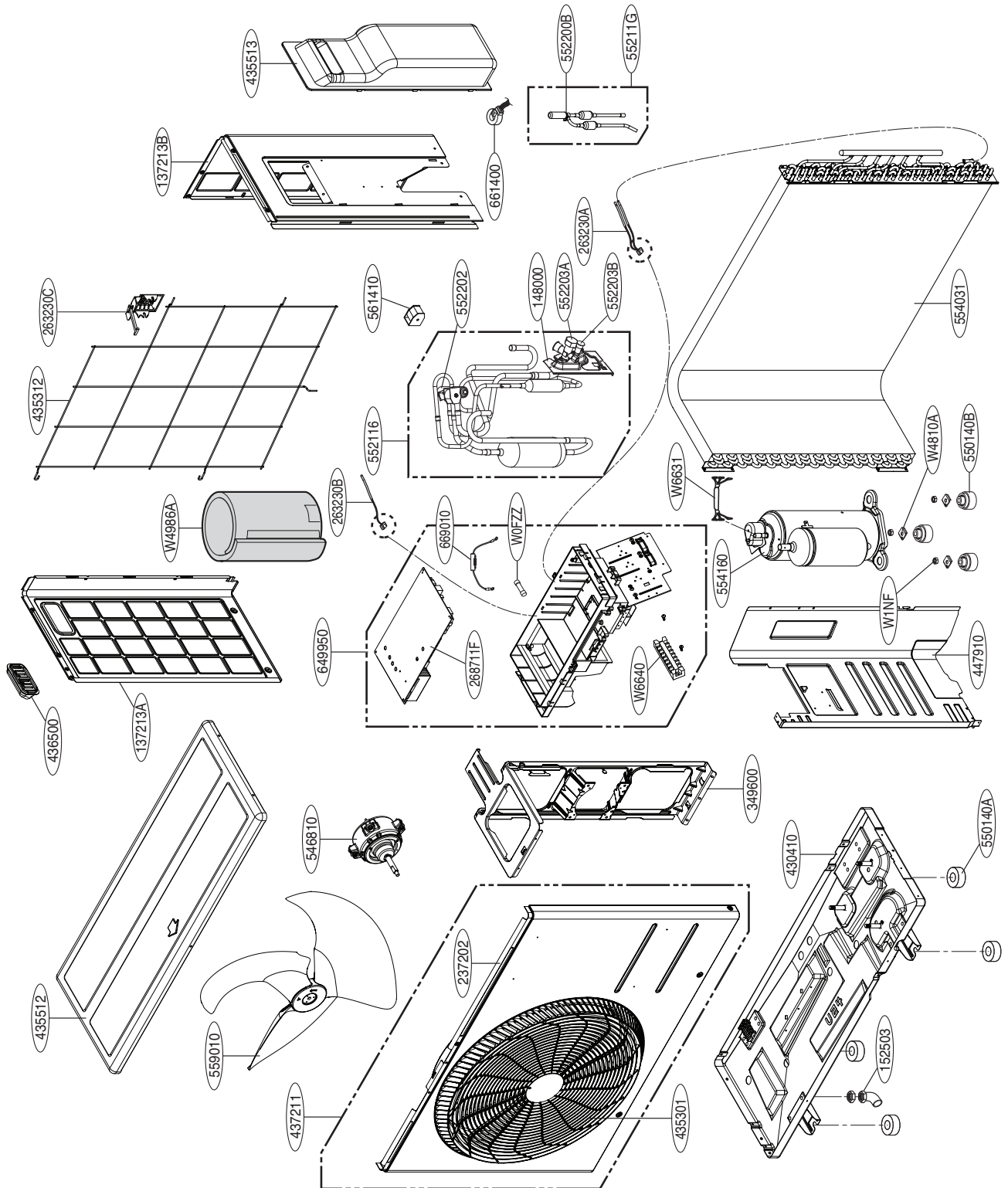
5. Exploded View

Indoor Unit



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

Outdoor Unit



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



P/NO : MFL67643621

August, 2017