



FRIEDRICH

1883

SVC Manual (Exploded View)

DUCTLESS SPLIT SYSTEMS



Model: M24YJ
M30YJ
M36YJ

THE EXPERTS IN ROOM AIR CONDITIONING

FAC P/no : 960-920-02

Product Specifications

System			24k	30k	36k	
FAC Model Name	System		M24YJ	M30YJ	M36YJ	
	Outdoor Unit		MR24Y3J	MR30Y3J	MR36Y3J	
	Indoor Unit		MW24Y3J	MW30Y3J	MW36Y3J	
Cooling Capacity		kW	6.447	8.792	9.671	
		Btu/h.	22,000	30,000	33,000	
Heating Capacity		kW	8.088	9.378	10.316	
		Btu/h.	27,000	32,000	35,200	
Power Input	Cooling/Heating	W	1760/2,380	3,000/3,100	4,035/3,840	
Running Current	Cooling/Heating	A	7.9/10.7	13.4/13.9	17.0/16.2	
Starting Current	Cooling/Heating	A	7.9/10.7	13.4/13.9	17.0/16.2	
Cooling COP		-	3.66	2.93	2.4	
EER		-	12.5	10	8.2	
SEER		-	21.5	19	17.5	
HSPF		-	11	10	10	
Power Supply		Ø/ V / Hz	1/208-230/60	1/208-230/60	1/208-230/60	
Power Factor		%	97	97.5	97.5	
Air Flow Rate	Indoor (QUIET, LOW, MED, HIGH)	m ³ /min(CFM)	13(459)/15(530)/20(706)/24(848)	13(459)/15(530)/20(706)/24(848)	13(459)/15(530)/20(706)/24(848)	
	Outdoor,Max	m ³ /min(CFM)	60(2,119)	60(2,119)	60(2,119)	
Moisture Removal		l/h.	2.6	2.8	3.1	
Sound Level	Indoor,H/M/L/Sleep	dB(A)±3	49 / 44 / 40 / 37	49 / 44 / 40 / 37	49 / 44 / 40 / 37	
	Outdoor,Max	dB(A)±3	55	55	55	
Refrigerant & Charge (at 7.5 m/24.6ft)		g(oz)	R410A, 2,200(77.6)	R410A, 2,200(77.6)	R410A, 2,200(77.6)	
Additional Refrigerant charge		g/m(oz/ft)	35(0.38)	35(0.38)	35(0.38)	
Compressor	Type		Twin Rotary	Twin Rotary	Twin Rotary	
	Model		GJT240MBA	GJT240MBA	GJT240MBA	
	Motor Type		Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	
	Oil Type		PVE(FVC68D)	PVE(FVC68D)	PVE(FVC68D)	
	Oil Charge	cc	900	900	900	
O.L.P. name		-	-	-		
Fan(Indoor)	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	76.1	76.1	76.1	
Fan(Outdoor)	Type		Propeller, Fan	Propeller, Fan	Propeller, Fan	
	Motor Type		BLDC	BLDC	BLDC	
	Motor Output	W	124	124	124	
Circuit Breaker*		A	25	25	25	
Power Supply Cable		No.*mm ² (AWG)	3*2.5 (12)	3*2.5 (12)	3*2.5 (12)	
Power and Transmission Cable		No.*mm ² (AWG)	4*1.0 (18)	4*1.0 (18)	4*1.0 (18)	
Piping Connections	Liquid Side	mm(in)	9.52(3/8)	9.52(3/8)	9.52(3/8)	
	Gas Side	mm(in)	15.88(5/8)	15.88(5/8)	15.88(5/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	1190*346*265	1190*346*265	1190*346*265	
		inch	46.9*13.6*10.4	46.9*13.6*10.4	46.9*13.6*10.4	
	Outdoor (W*H*D)	mm	870*800*320	870*800*320	870*800*320	
		inch	34.3*31.5*12.6	34.3*31.5*12.6	34.3*31.5*12.6	
Net Weight	Indoor	kg(lbs)	18(39.7)	18(39.7)	18(39.7)	
	Outdoor	kg(lbs)	56.5(124.56)	56.5(124.56)	56.5(124.56)	
Gross Weight	Indoor	kg(lbs)	20.5(45.2)	20.5(45.2)	20.5(45.2)	
	Outdoor	kg(lbs)	60(132.28)	60(132.28)	60(132.28)	
Operation Range	Cooling(Outdoor)	°C(°F)	-10(-18)*~48(14(-0.4))*~118.4)	-10(-18)*~48(14(-0.4))*~118.4)	-10(-18)*~48(14(-0.4))*~118.4)	
	Heating(Outdoor)	°C(°F)	-20(-4)~24(75.2)	-20(-4)~24(75.2)	-20(-4)~24(75.2)	
Piping Length (Min/Max)		m(ft)	- / 50(164)	- / 50(164)	- / 50(164)	
Chargeless		m(ft)	7.5(24.6)	7.5(24.6)	7.5(24.6)	
Max. Elevation Difference		m(ft)	30(98.4)	30(98.4)	30(98.4)	
Tool Code(Chassis)	Indoor + Outdoor		SV + UE1+	SV + UE1+	SV + UE1+	
Functions	Temperature Control		○	○	○	
	Allergy free filter		-	-	-	
	Plasma Filter		-	-	-	
	Prefilter(washable/anti-fungus)		○	○	○	
	Auto Clean		○	○	○	
	CHAOS Wind(Auto Wind)		○	○	○	
	Steps, Fan/Cool/Heat		5/6/6	5/6/6	5/6/6	
	Airflow Direction Control(Up& Down)		Auto	Auto	Auto	
	Airflow Direction Control(Left & Right)		Auto	Auto	Auto	
	Remote Controller Type		Wireless LCD	Wireless LCD	Wireless LCD	
	Setting Temperature	Cooling	18°C~30°C	18°C~30°C	18°C~30°C	
	Range	Heating	16°C~30°C	16°C~30°C	16°C~30°C	
	Auto Operation (MicomControl)		-	-	-	
	Auto Changeover (MicomControl)		○	○	○	
	Self Diagnosis		○	○	○	
	Timer		24h, On/off	24h, On/off	24h, On/off	
	Sleep Operation		○	○	○	
	Soft Dry Operation		○	○	○	
	Restart Delay(minute)		3	3	3	
	Deice Control(Defrost)		○	○	○	
	Hot Start		○	○	○	
	Surge Cool(Surge)		○	○	○	
	Low Ambient Operation		○	○	○	
	Special Function			Water Level Sensor	Water Level Sensor	Water Level Sensor
				Wind Baffle kit	Wind Baffle kit	Wind Baffle kit
				()* : use wind baffle kit	()* : use wind baffle kit	()* : use wind baffle kit

Note:

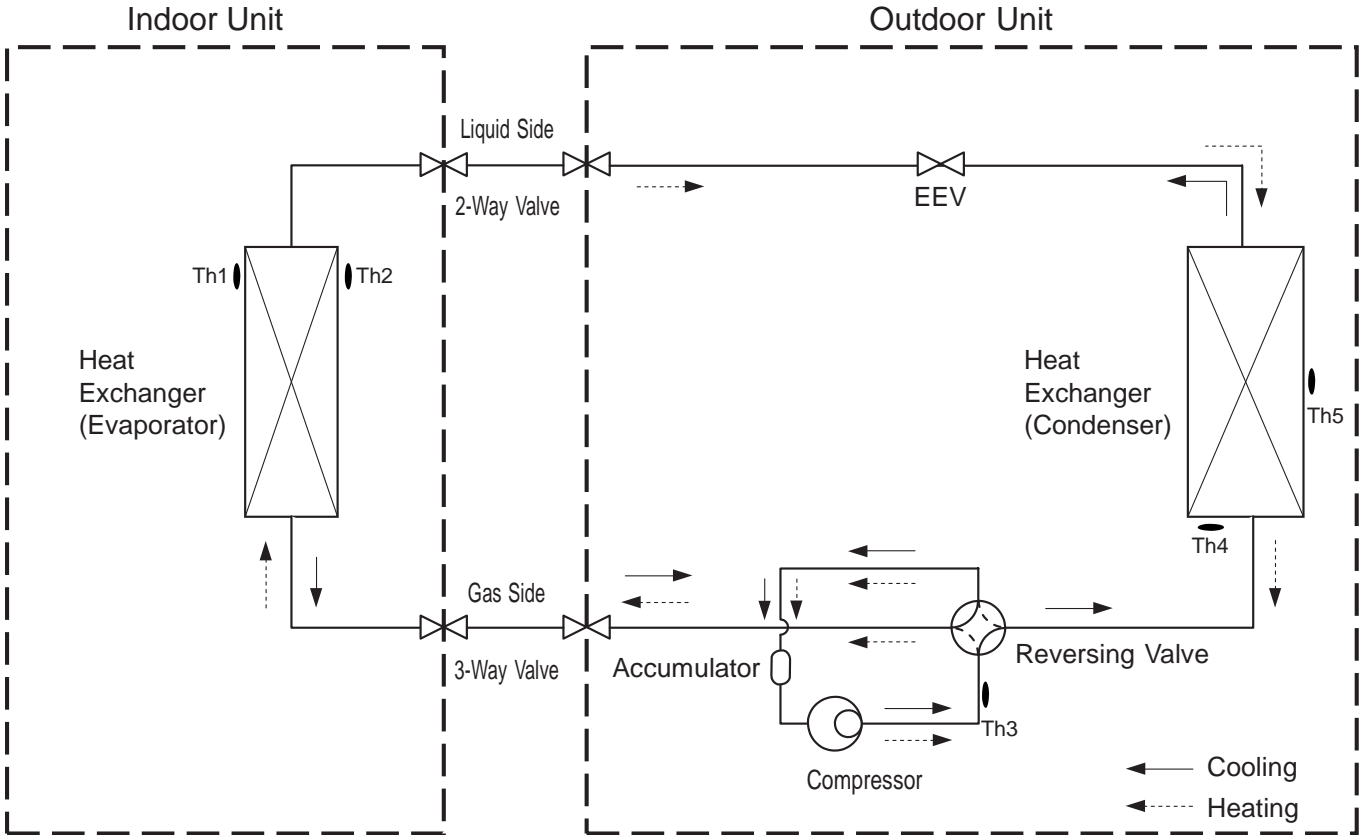
O : Applied, - : No relation

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

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

Piping Diagrams

Model : M24YJ / M30YJ / M36YJ

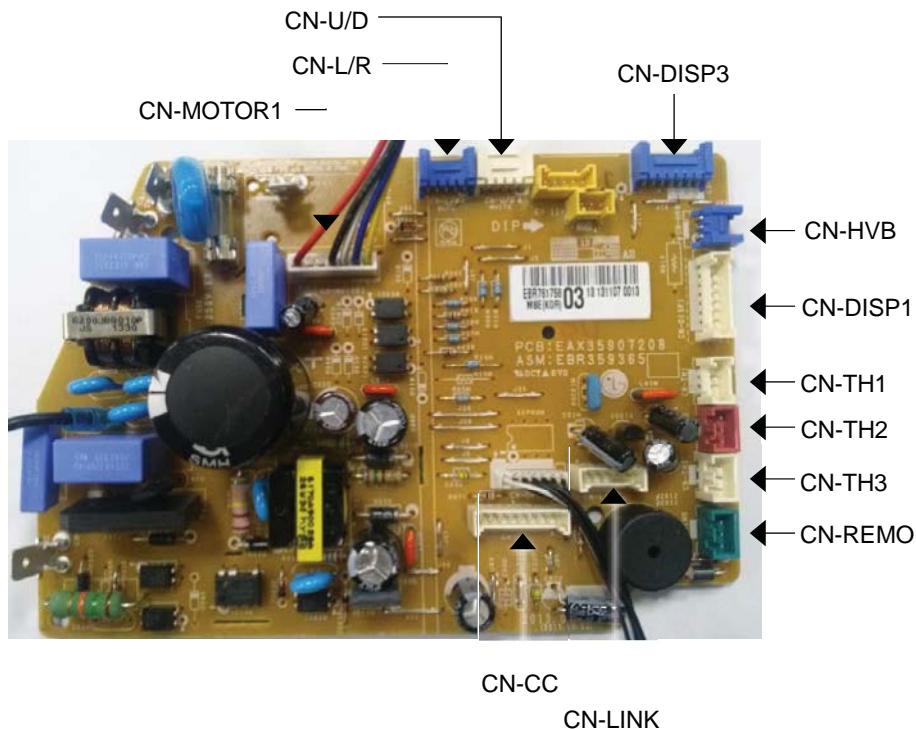
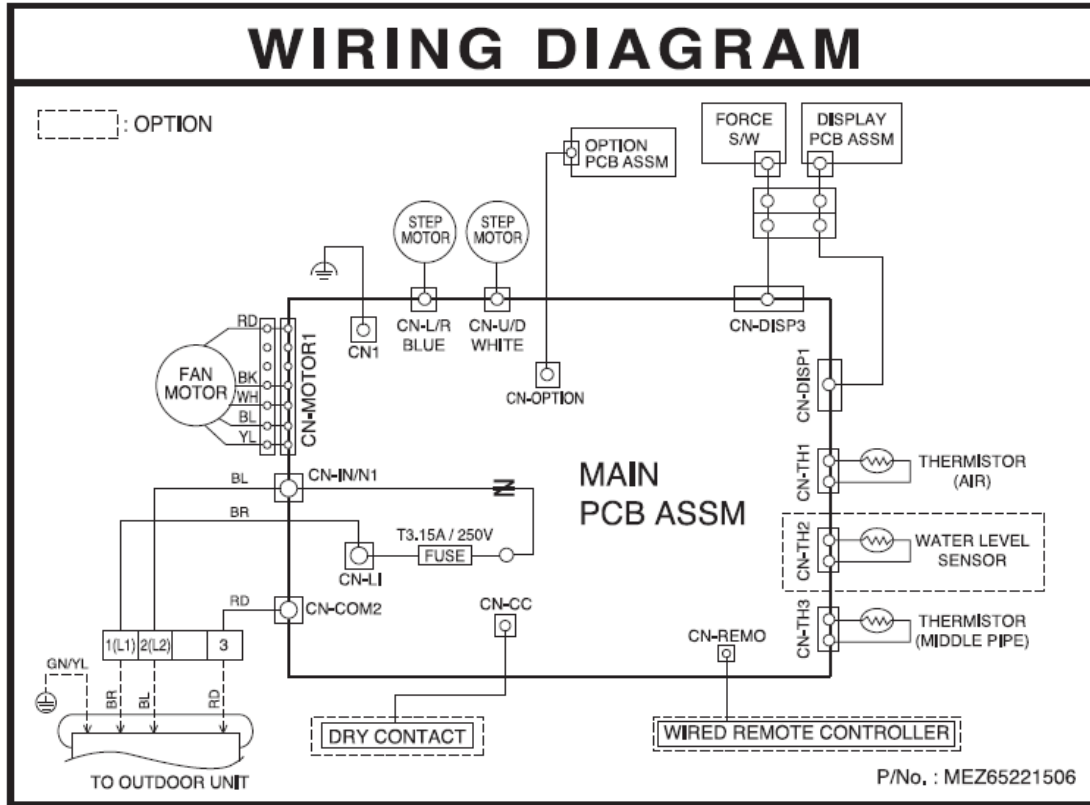


LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1(Indoor)
Th2	Thermistor for evaporator middle temperature	CN-TH3(Indoor)
Th3	Thermistor for discharge pipe temperature	CN-TH3(OUTDOOR)
Th4	Thermistor for condensing temperature	CN-TH2(OUTDOOR)
Th5	Thermistor for outdoor air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

Wiring Diagrams

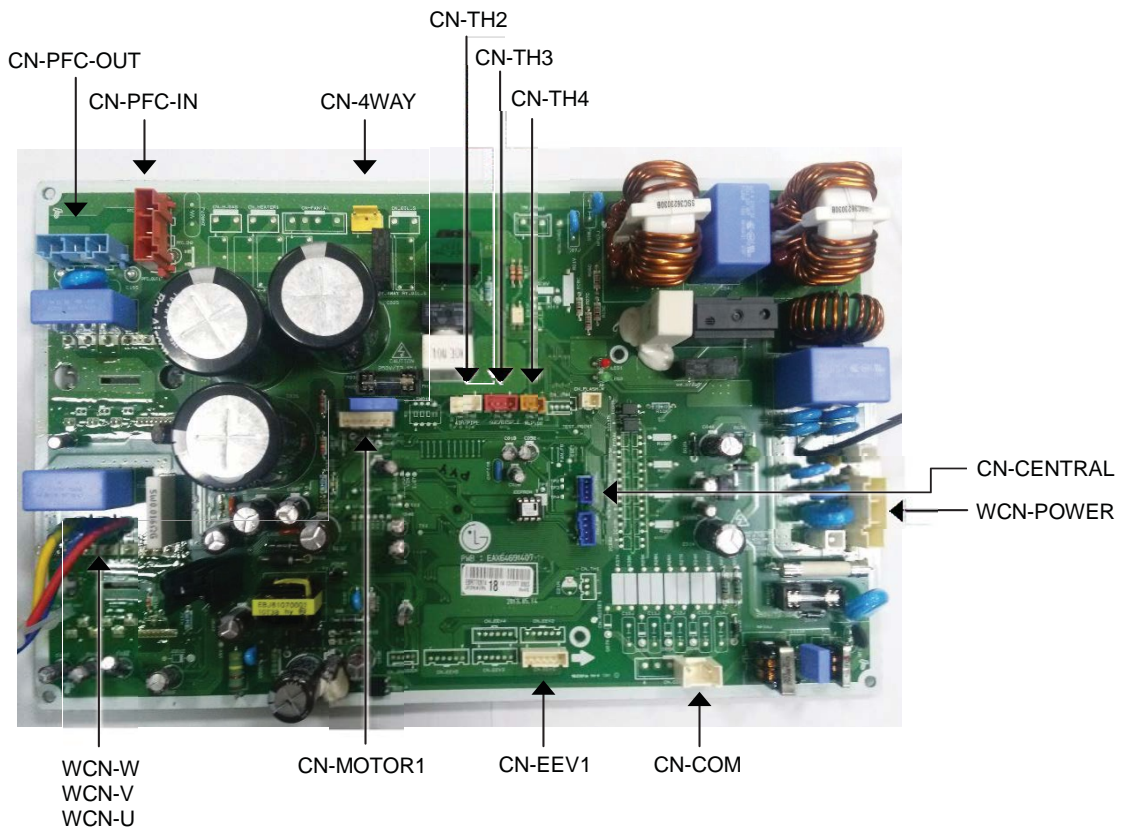
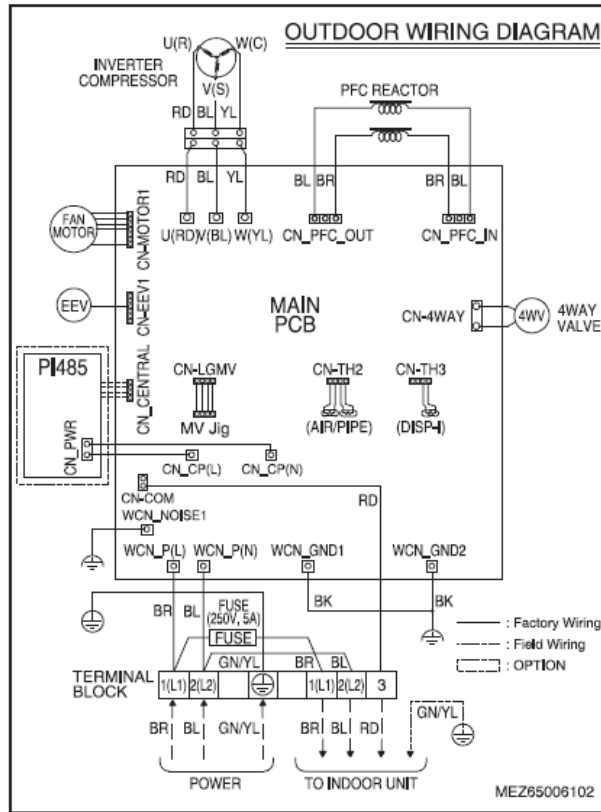
Indoor Unit

Model : MW24Y3J / MW30Y3J / MW36Y3J



Outdoor Unit

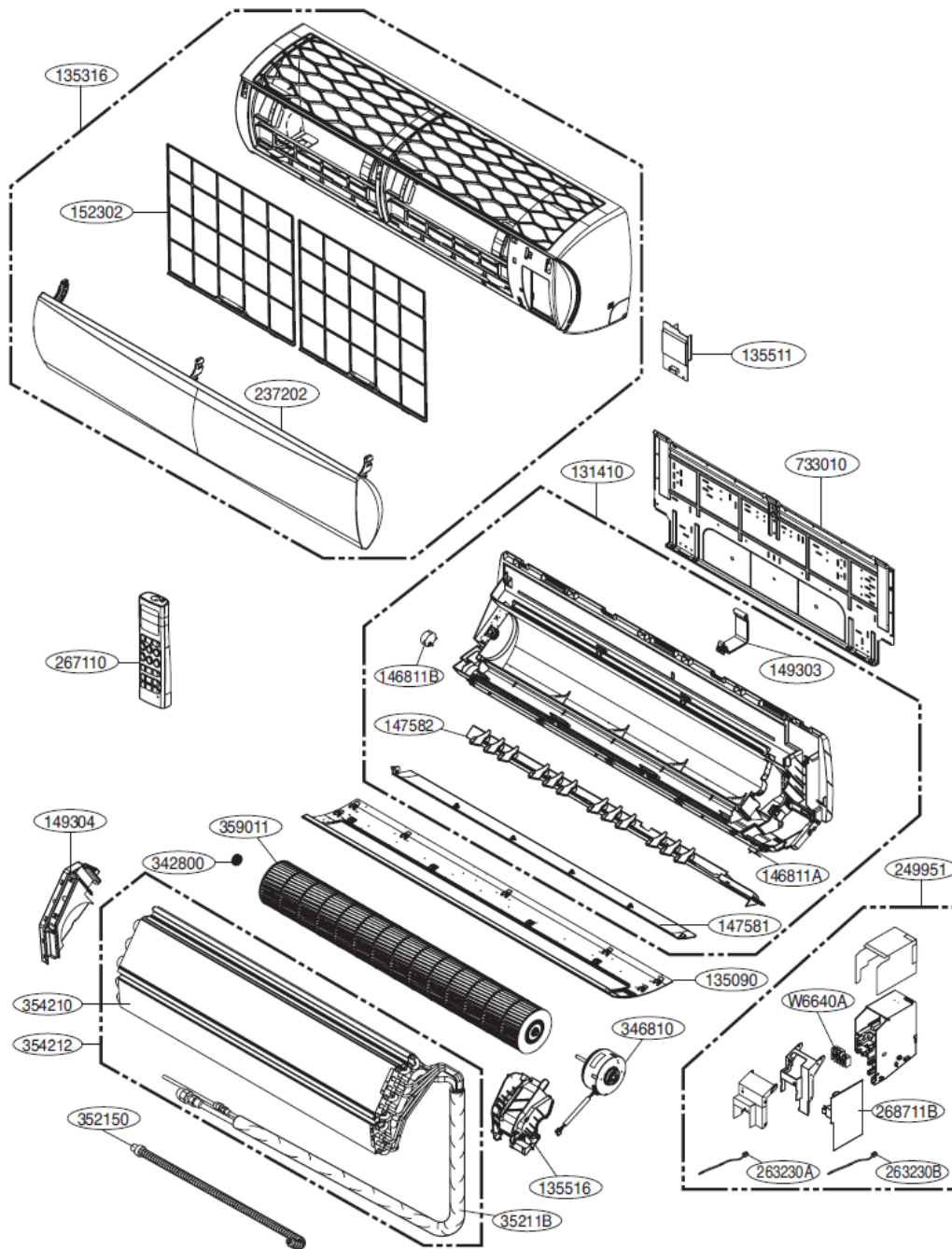
Model : MR24Y3J / MR30Y3J / MR36Y3J



Exploded View

Indoor Unit

Model : MW24Y3J / MW30Y3J / MW36Y3J



LOC	Description
263230A	Thermistor for suction air temperature
263230B	Thermistor for evaporator middle temperature

Model : MW24Y3J

MW24Y3J			
Loc. No	P/N_FRD	Description	Qty
135316	67602532	Grille Assy Front(Indoor)	1
152302	67602209	Filter,Air	2
237202	67603849	Panel,Front	1
135511	67601603	Cover Assembly,Control(Indoor)	1
267110	67604307	Remote Controller Assembly	1
733010	67604000	Plate Assembly,Installation	1
131410	67601007	Chassis Assembly	1
149303	67602706	Holder,Tubing	1
146811B	67603323	Motor Assembly,DC,Stepping	1
146811A	67603322	Motor Assembly,DC,Stepping	1
147582	67603200	Louver Assembly	1
147581	67603204	Louver,Horizontal	1
135090	67601803	Decor Assembly	1
359011	67602110	Fan Assembly,Cross Flow	1
346810	67603325	Motor, DC Indoor	1
135516	67601609	Cover Assembly,Motor	1
342800	67606700	Bearing	1
149304	67602704	Holder,Evaporator	1
352150	67602804	Hose Assembly,Drain	1
354212	67602007	Evaporator Assembly,Final	1
354210	67602014	Evaporator Assembly,First	1
35211B	67605004	Tube Assembly,Tubing	1
249951	67600941	Case Assy Control(Indoor)	1
W6640A	67601404	Connector,Terminal Block	1
268711B	67603951	PCB Assy Main	1
263230A	67604818	Thermistor Assembly,NTC	1
263230B	67604808	Thermistor Assembly,NTC	1

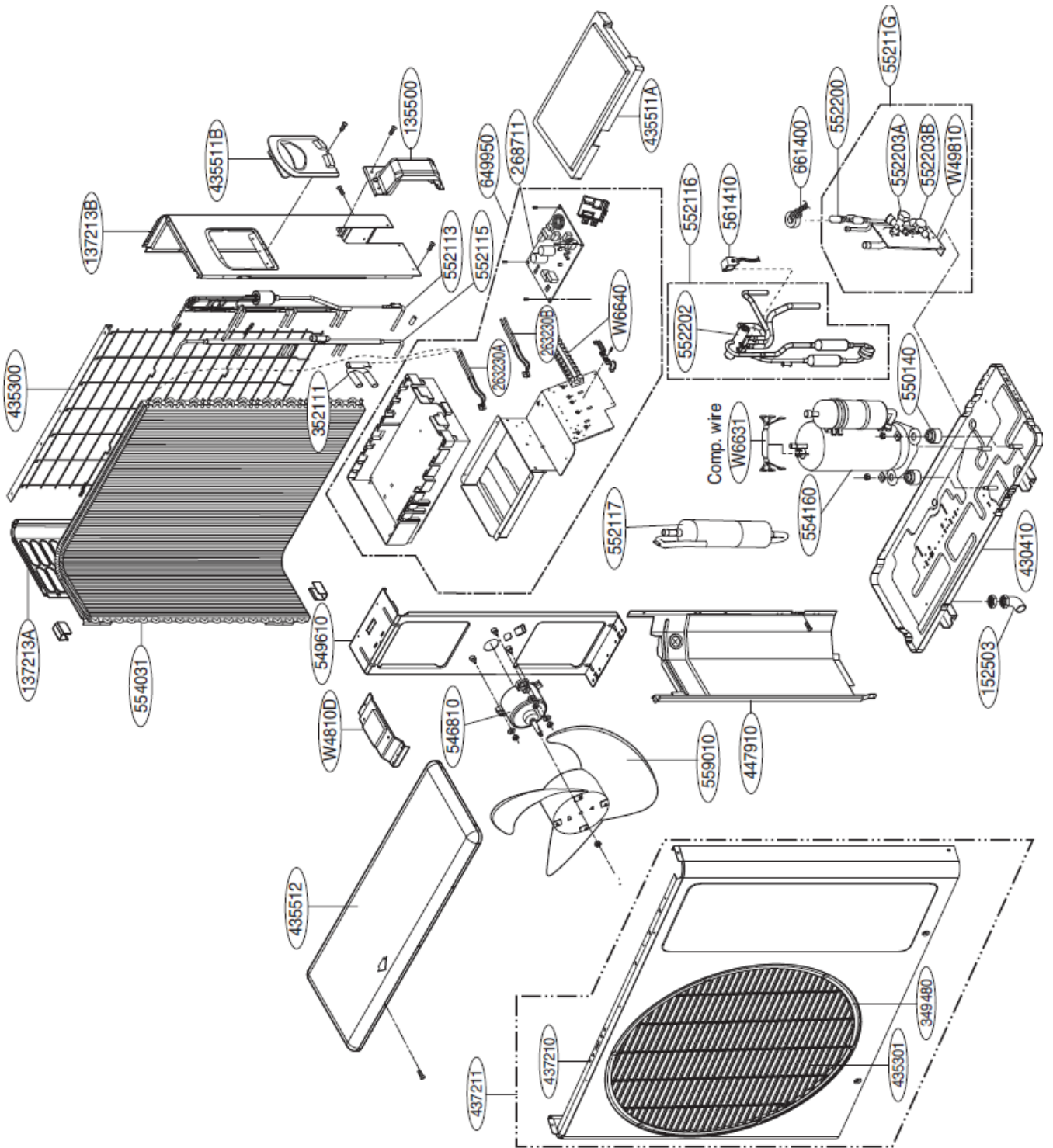
Model : MW30Y3J

MW30Y3J			
Loc No.	P/N_FRD	Description	Qty
135316	67602532	Grille Assembly,Front(Indoor)	1
152302	67602209	Filter,Air	2
237202	67602534	Panel Front	1
135511	67601603	Cover Assembly,Control(Indoor)	1
267110	67604307	Remote Controller Assembly	1
733010	67604000	Plate Assembly,Installation	1
131410	67601007	Chassis Assembly	1
149303	67602706	Holder,Tubing	1
146811B	67603323	Motor Assembly,DC,Stepping	1
146811A	67603322	Motor Assembly,DC,Stepping	1
147582	67603200	Louver Assembly	1
147581	67603204	Louver,Horizontal	1
135090	67601803	Decor Assembly	1
359011	67602110	Fan Assembly,Cross Flow	1
346810	67603325	Motor, DC Indoor	1
135516	67601609	Cover Assembly,Motor	1
342800	67606700	Bearing	1
149304	67602704	Holder,Evaporator	1
352150	67602804	Hose Assembly,Drain	1
354212	67602007	Evaporator Assembly,Final	1
354210	67602014	Evaporator Assembly,First	1
35211B	67605004	Tube Assembly,Tubing	1
249951	67600941	Case Assembly,Control(Indoor)	1
W6640A	67601404	Connector,Terminal Block	1
268711B	67603951	PCB Assembly,Main	1
263230A	67604818	Thermistor Assembly,NTC	1
263230B	67604808	Thermistor Assembly,NTC	1

Model : MW36Y3J

MW36Y3J			
Loc No.	P/N_FRD	Description	Qty
135316	67602532	Grille Assembly,Front(Indoor)	1
152302	67602209	Filter,Air	2
237202	67602534	Panel,Front	1
135511	67601603	Cover Assembly,Control(Indoor)	1
267110	67604307	Remote Controller Assembly	1
733010	67604000	Plate Assembly,Installation	1
131410	67601007	Chassis Assembly	1
149303	67602706	Holder,Tubing	1
146811B	67603323	Motor Assembly,DC,Stepping	1
146811A	67603322	Motor Assembly,DC,Stepping	1
147582	67603200	Louver Assembly	1
147581	67603204	Louver,Horizontal	1
135090	67601803	Decor Assembly	1
359011	67602110	Fan Assembly,Cross Flow	1
346810	67603325	Motor, DC Indoor	1
135516	67601609	Cover Assembly,Motor	1
342800	67606700	Bearing	1
149304	67602704	Holder,Evaporator	1
352150	67602804	Hose Assembly,Drain	1
354212	67602007	Evaporator Assembly,Final	1
354210	67602014	Evaporator Assembly,First	1
35211B	67605004	Tube Assembly,Tubing	1
249951	67600941	Case Assembly,Control(Indoor)	1
W6640A	67601404	Connector,Terminal Block	1
268711B	67603951	PCB Assembly,Main	1
263230A	67604818	Thermistor Assembly,NTC	1
263230B	67604808	Thermistor Assembly,NTC	1

Outdoor Unit
Model: MR24Y3J / MR30Y3J / MR36Y3J



LOC	Description
263230A	Thermistor for discharge pipe temperature
	Thermistor for outdoor air temperature
263230B	Thermistor for condensing middle temperature

Model: MR24Y3J

MR24Y3J			
Loc. No	P/N_FRD	Description	Qty
437211	67603850	Panel Assy Front(Outdoor)	1
435301	67602533	Grille Discharge	1
349480	67603602	Orifice	1
437210	67603810	Panel Assembly,Front(Sub)	1
435512	67601610	Cover Assembly,Top(Outdoor)	1
559010	67602115	Fan,Propeller	1
447910	67600302	Barrier Assembly,Outdoor	1
546810	67603312	Motor Assembly,DC,Outdoor	1
W4810D	67600700	Bracket	1
549610	67600707	Bracket Assembly,Motor	1
554031	67601305	Condenser Assembly,Bending	1
137213A	67603828	Panel Assembly,Side	1
435300	67602518	Grille,Rear	1
137213B	67603827	Panel Assembly,Side	1
435511B	67601608	Cover Assembly,Control(Outdoor)	1
135500	67601506	Cover	1
552113	67605304	Tube Assembly,Condenser(Out)	1
352111	67605400	Tube Assembly,Connector	1
552115	67606009	Tube Assembly,Manifold(Outdoor)	1
649950	67600942	Case Assembly,Control(Outdoor)	1
268711	67603952	PCB Assy	1
W6640	67601400	Connector,Terminal Block	1
263230A	67601813	Thermistor Assembly,NTC	1
263230B	67604817	Thermistor Assembly,NTC	1
435511A	67601605	Cover Assembly,Control(Outdoor)	1
552117	67606204	Tube Assembly,Suction(Outdoor)	1
W6631	67602601	Harness,Multi	1
554160	67604201	Compressor Set,Korea	1
550140	67601702	Damper,Compressor	3
152503	67603500	Nipple,Drain	1
430410	67600605	Base Assembly,Outdoor	1
552202	67606403	Valve,Reverse	1
552116	67606105	Tube Assembly,Reverse	1
561410	67601905	Drawing,Assembly	1
661400	67601101	Coil,Expansion	1
552200	67606302	Valve,Expansion Body	1
55211G	67605903	Tube Assembly,Expansion	1
552203A	67606507	Valve,Service	1
552203B	67606516	Valve Service	1
W49810	67604606	Supporter Assembly	1

Model: MR30Y3J

MR30Y3J			
Loc No.	P/N_FRD	Description	Qty
437211	67603850	Panel Assembly,Front(Outdoor)	1
435301	67602533	Grille,Discharge	1
349480	67603602	Orifice	1
437210	67603810	Panel Assembly,Front(Sub)	1
435512	67601610	Cover Assembly,Top(Outdoor)	1
559010	67602115	Fan,Propeller	1
447910	67600302	Barrier Assembly,Outdoor	1
546810	67603312	Motor Assembly,DC,Outdoor	1
W4810D	67600700	Bracket	1
549610	67600707	Bracket Assembly,Motor	1
554031	67601305	Condenser Assembly,Bending	1
137213A	67603828	Panel Assembly,Side	1
435300	67602518	Grille,Rear	1
137213B	67603827	Panel Assembly,Side	1
435511B	67601608	Cover Assembly,Control(Outdoor)	1
135500	67601506	Cover	1
552113	67605304	Tube Assembly,Condenser(Out)	1
352111	67605400	Tube Assembly,Connector	1
552115	67606009	Tube Assembly,Manifold(Outdoor)	1
649950	67600943	Case Assy Control(Outdoor)	1
268711	67603953	PCB Assly	1
W6640	67601400	Connector,Terminal Block	1
263230A	67604813	Thermistor Assembly,NTC	1
263230B	67604817	Thermistor Assembly,NTC	1
435511A	67601605	Cover Assembly,Control(Outdoor)	1
552117	67606204	Tube Assembly,Suction(Outdoor)	1
W6631	67602601	Harness,Multi	1
554160	67604201	Compressor Set,Korea	1
550140	67601702	Damper,Compressor	3
152503	67603500	Nipple,Drain	1
430410	67600605	Base Assembly,Outdoor	1
552202	67606403	Valve,Reverse	1
552116	67606105	Tube Assembly,Reverse	1
561410	67601905	Drawing,Assembly	1
661400	67601101	Coil,Expansion	1
552200	67606302	Valve,Expansion Body	1
55211G	67605903	Tube Assembly,Expansion	1
552203A	67606507	Valve,Service	1
552203B	67606516	Valve,Service	1
W49810	67604606	Supporter Assembly	1

Model: MR36Y3J

MR36Y3J			
Loc No.	P/N_FRD	Description	Qty
437211	67603850	Panel Assembly,Front(Outdoor)	1
435301	67602533	Grille,Discharge	1
349480	67603602	Orifice	1
437210	67603810	Panel Assembly,Front(Sub)	1
435512	67601610	Cover Assembly,Top(Outdoor)	1
559010	67602115	Fan,Propeller	1
447910	67600302	Barrier Assembly,Outdoor	1
546810	67603312	Motor Assembly,DC,Outdoor	1
W4810D	67600700	Bracket	1
549610	67600707	Bracket Assembly,Motor	1
554031	67601305	Condenser Assembly,Bending	1
137213A	67603828	Panel Assembly,Side	1
435300	67602518	Grille,Rear	1
137213B	67603827	Panel Assembly,Side	1
435511B	67601608	Cover Assembly,Control(Outdoor)	1
135500	67601506	Cover	1
552113	67605304	Tube Assembly,Condenser(Out)	1
352111	67605400	Tube Assembly,Connector	1
552115	67606009	Tube Assembly,Manifold(Outdoor)	1
649950	67600944	Case Assy Control(Outdoor)	1
268711	67603954	PCB Assy	1
W6640	67601400	Connector,Terminal Block	1
263230A	67604813	Thermistor Assembly,NTC	1
263230B	67604817	Thermistor Assembly,NTC	1
435511A	67601605	Cover Assembly,Control(Outdoor)	1
552117	67606204	Tube Assembly,Suction(Outdoor)	1
W6631	67602601	Harness,Multi	1
554160	67604201	Compressor Set,Korea	1
550140	67601702	Damper,Compressor	3
152503	67603500	Nipple,Drain	1
430410	67600605	Base Assembly,Outdoor	1
552202	67606403	Valve,Reverse	1
552116	67606105	Tube Assembly,Reverse	1
561410	67601905	Drawing,Assembly	1
661400	67601101	Coil,Expansion	1
552200	67606302	Valve,Expansion Body	1
55211G	67605903	Tube Assembly,Expansion	1
552203A	67606507	Valve,Service	1
552203B	67606516	Valve,Service	1
W49810	67604606	Supporter Assembly	1

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