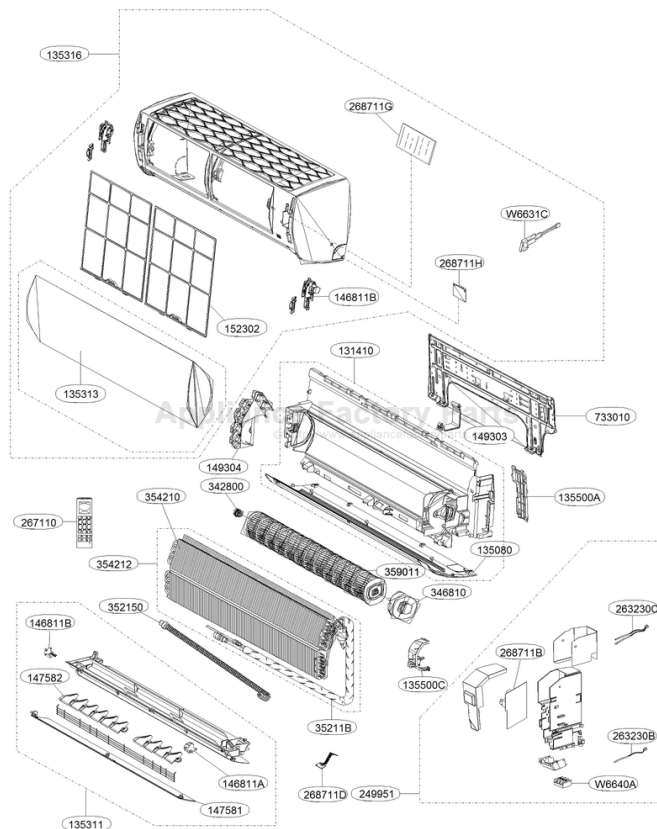


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# FRIEDRICH MRH12Y3J Owner's Manual

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PCB Assembly Main



**FRIEDRICH**

1883

# SVC Manual(Exploded View)

## DUCTLESS SPLIT SYSTEMS



Model : HM12YJ

THE EXPERTS IN ROOM AIR CONDITIONING

FAC P/No : 960-914-07

# Product Specifications

System			12K	
FAC Model Name	System		MH12YJ	
	Outdoor Unit		MRH12Y3J	
	Indoor Unit		MWH12Y3J	
Cooling Capacity		kW	3.516	
		Btu/h.	12,000	
Heating Capacity		kW	3.986	
		Btu/h.	13,600	
Power Input	Cooling/Heating	W	857/960	
Running Current	Cooling/Heating	A	3.8 / 4.3	
Starting Current	Cooling/Heating	A	3.8 / 4.3	
Cooling COP		-	4.1	
EER		W/W	4.13	
SEER		Btu/h.W	14	
HSPF			25	
Power Supply		Ø / V / Hz	1/208-230/60	
Power Factor		%	97.7	
Air Flow Rate	Indoor,Max	m <sup>3</sup> /min(CFM)	14(494)	
	Outdoor,Max	m <sup>3</sup> /min(CFM)	50(1,766)	
Moisture Removal		l/h.	1.7	
Sound Level	Indoor,H/M/L/Sleep	dB(A)±3	42 / 36 / 25 / 17	
	Outdoor,Max	dB(A)±3	51	
Refrigerant & Charge (at 7.5 m)		g(oz)	R410A, 1,250(44.1)	
Additional Refrigerant charge		g/m(oz/ft)	20(0.22)	
Compressor	Type		2P Rotary	
	Model		GKT128MAA	
	Motor Type		Brushless DC Motor	
	Oil Type		FVC68D	
	Oil Charge	cc		450
Fan(Indoor)	O.L.P. name		-	
	Type		Cross Flow Fan	
Fan(Outdoor)	Motor Output	W	20	
	Type		Propeller, Fan	
Circuit Breaker*	Motor Type		BLDC	
	Motor Output	W	85	
Min.Ampacity		A	15	
Power Supply Cable		No.*mm <sup>2</sup> (AWG)	3*1.0(16)	
Power and Transmission Cable		No.*mm <sup>2</sup> (AWG)	4*1.0(16)	
Piping Connections	Liquid Side	mm(in)	6.35(1/4)	
	Gas Side	mm(in)	9.52(3/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	875*295*235	
		inch	34.4*11.6*9.25	
	Outdoor (W*H*D)	mm	870*655*320	
		inch	34.2*25.8*12.6	
Net Weight	Indoor	kg(lbs)	11.0(24.25)	
	Outdoor	kg(lbs)	43(94.8)	
Gross Weight	Indoor	kg(lbs)	13.0(28.6)	
	Outdoor	kg(lbs)	45(99.2)	
Operation Range	Cooling(Outdoor)	°C(°F)	-10~48(14~118.4)	
	Heating(Outdoor)	°C(°F)	-10~24(14.0~75.2)	
Piping Length (Min/Max)		m(ft)	3(9.84) / 15(49.2)	
Chargeless		m(ft)	7.5(24.6)	
Max. Elevation Difference		m(ft)	7(23)	
Tool Code(Chassis)	Indoor + Outdoor		SM + UE	
Functions	Temperature Control		Thermistor	
	Allergy free filter		-	
	Plasma Filter		0	
	Prefilter(washable/anti-fungus)		0	
	Auto Clean		0	
	CHAOS Wind(Auto Wind)		0	
	Steps, Fan/Cool/Heat		6/6/6	
	Airflow Direction Control(up& Down)		Auto	
	Airflow Direction Control(left & right)		Auto	
	Remote Controller Type		Wireless LCD	
	Setting Temperature	Cooling		18°C ~ 30°C
	Range	Heating		16°C ~ 30°C
	Auto Operation (Micom Control)			-
	Auto Changeover (Micom Control)			0
	Self Diagnosis			0
	Timer			24h, On/Off
	Sleep Operation			0
	Soft Dry Operation			0
	Restart Delay(minute)			3
	Deice Control(Defrost)			0
	Hot Start			0
	Jet Cool(Surge)			0
	Low Ambient Operation			0
	Special Function			Water Level Sensor

**Note:**

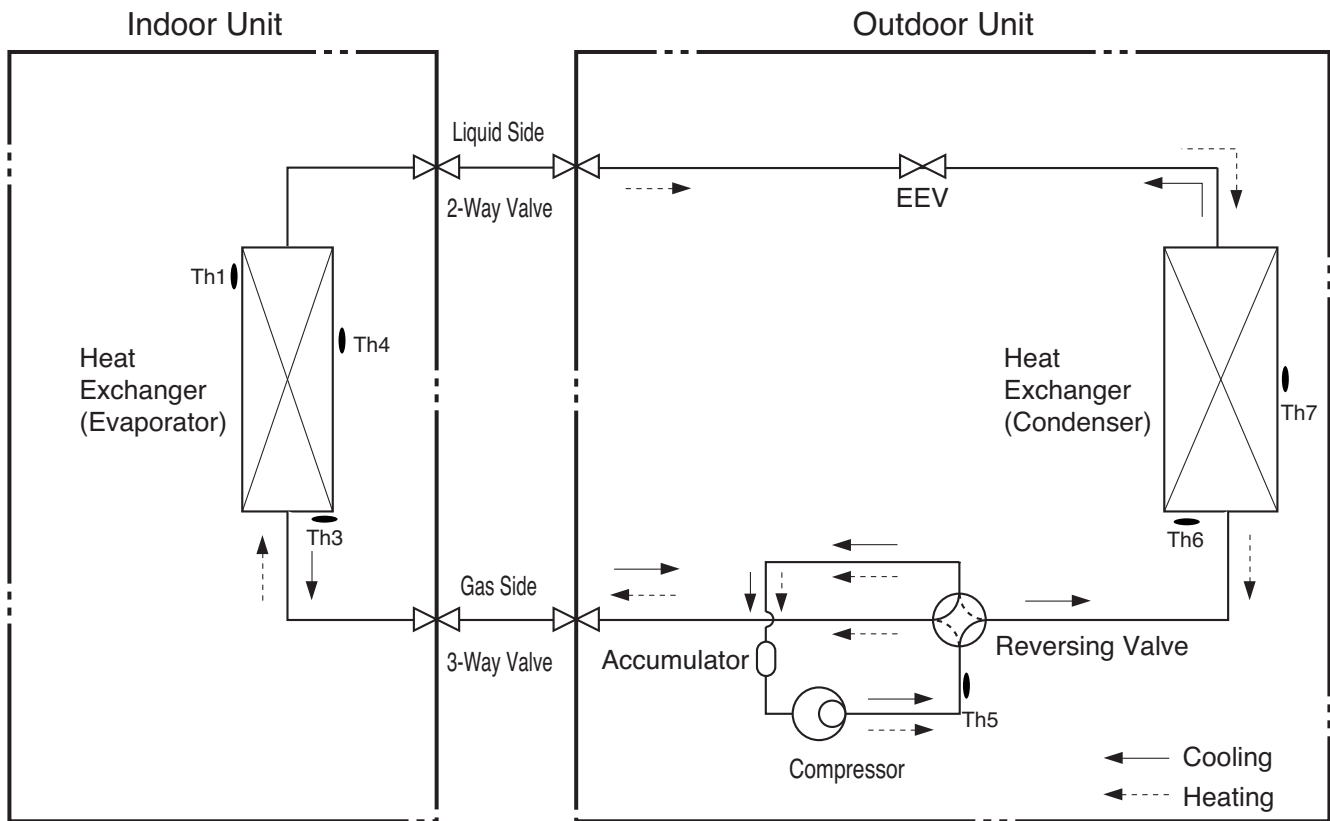
O : Applied, - : No relation

\* 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.

## 2. Piping Diagrams

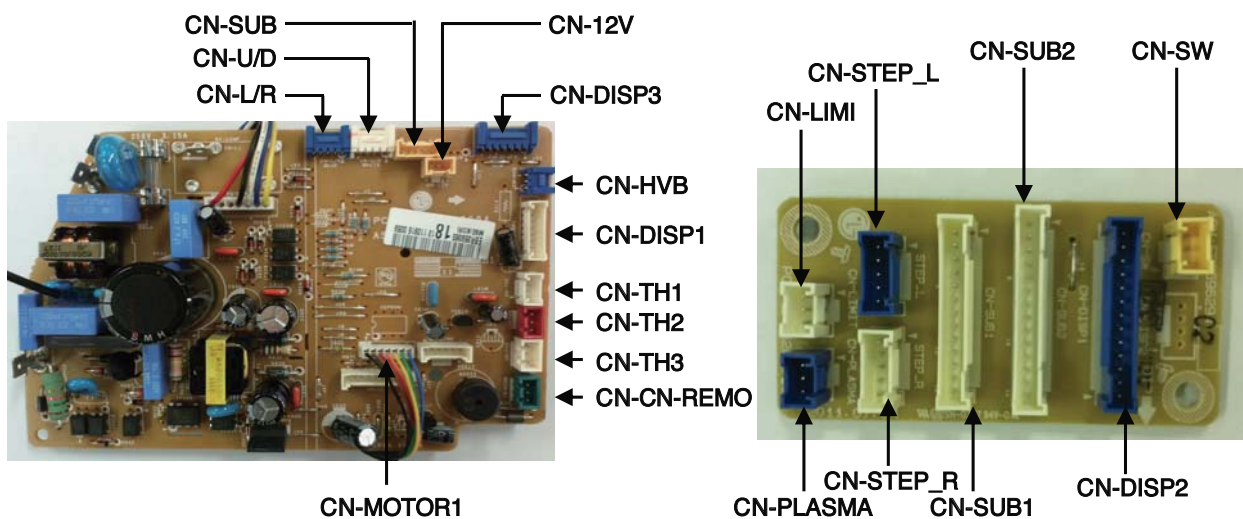
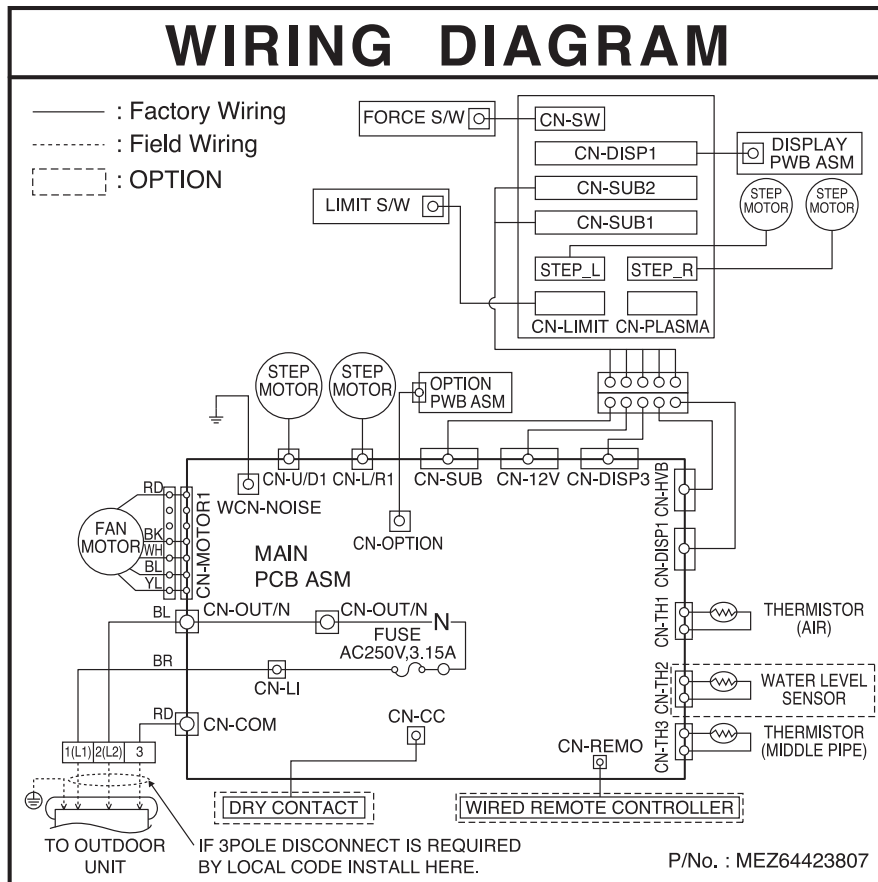


LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1(Indoor)
Th3	Water level sensor (Option)	CN-TH2(Indoor)
Th4	Thermistor for evaporator middle temperature	CN-TH3(Indoor)
Th5	Thermistor for discharge pipe temperature	CN-TH2(OUTDOOR)
Th6	Thermistor for condensing temperature	CN-TH1(OUTDOOR)
Th7	Thermistor for outdoor air temperature	CN-TH1(OUTDOOR)

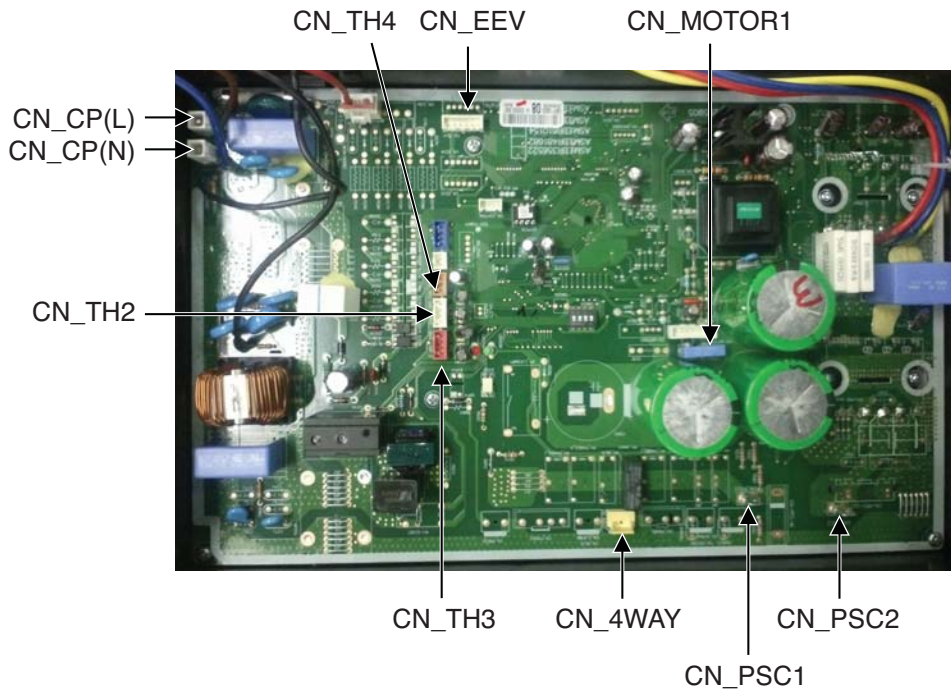
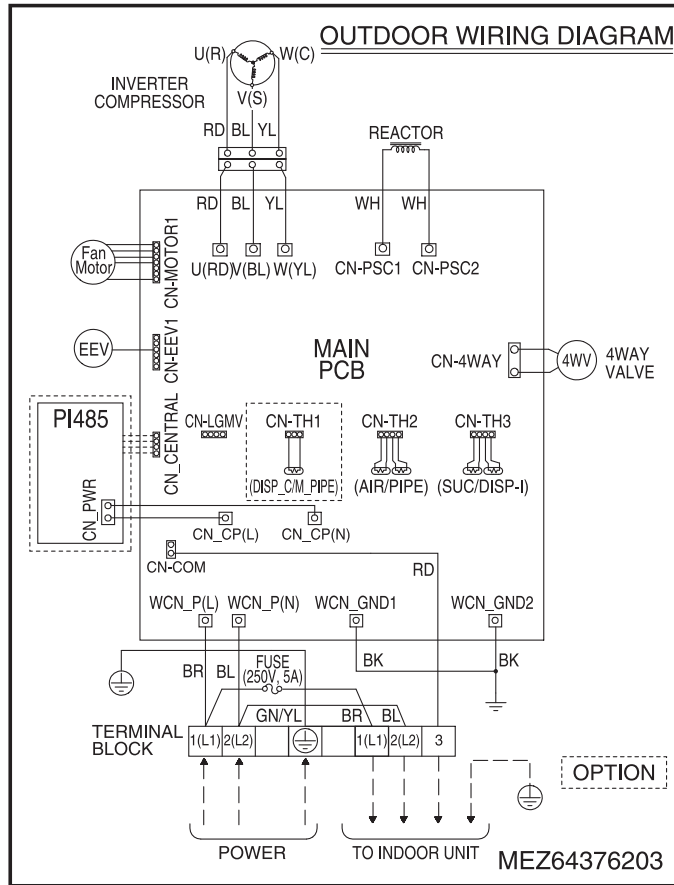
※ EEV : Electronic Expansion Valve

### 3. Wiring Diagrams

#### Indoor Unit

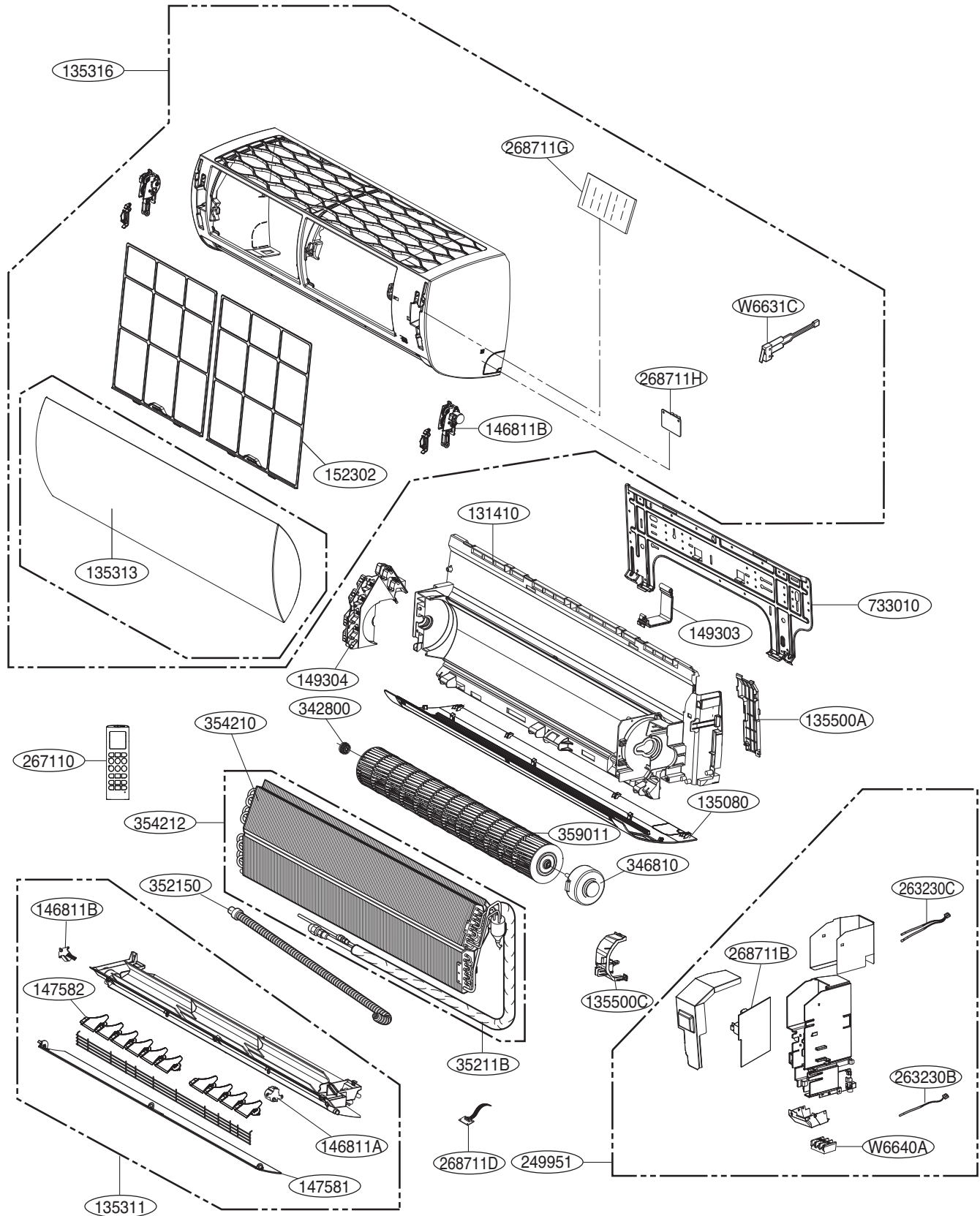


Outdoor Unit



# Exploded View

## Indoor Unit

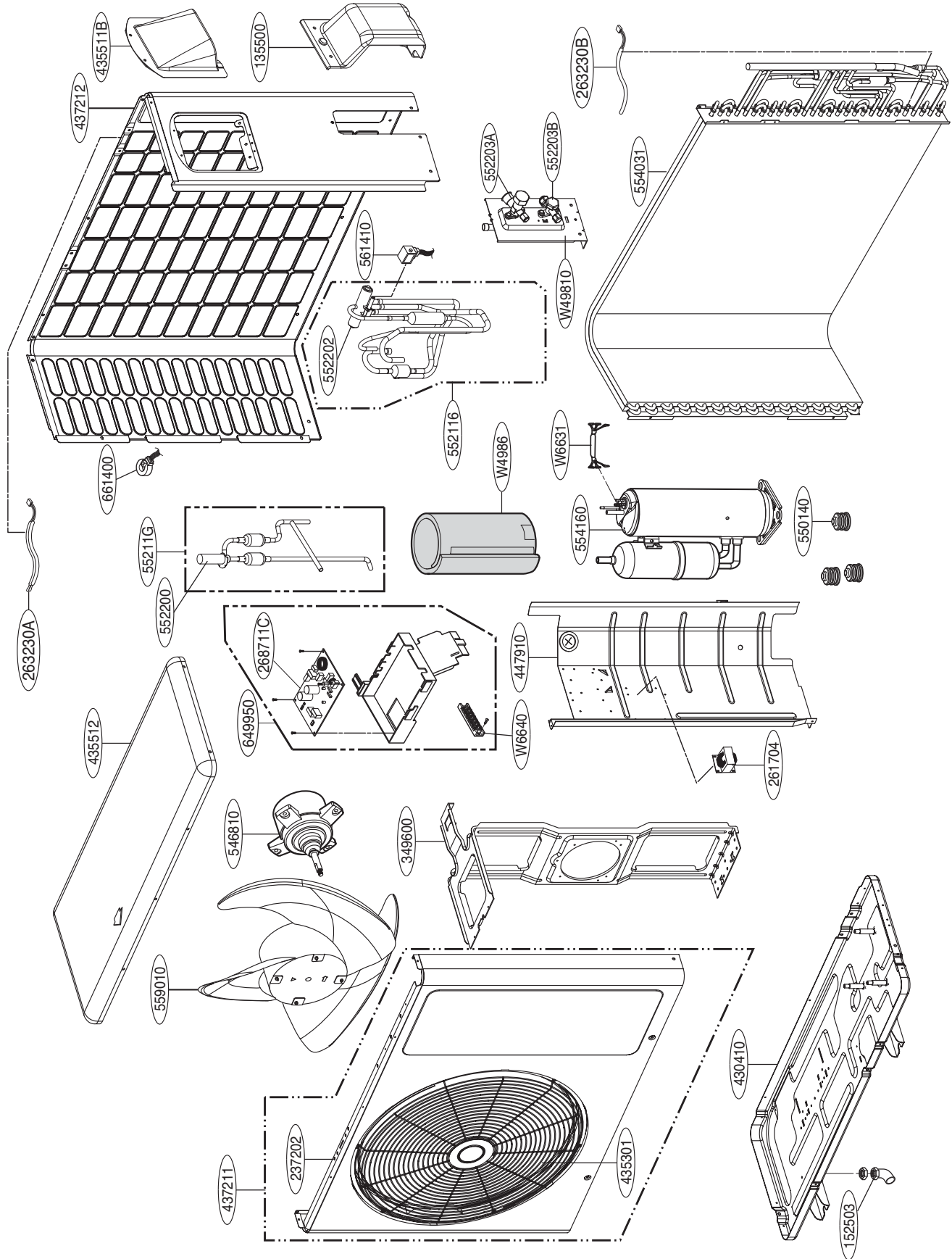


# Exploded View

## Indoor Unit

<b>MWH12Y3J</b>			
No.	Part Number	Description	Qty
W6631C	67300202	Harness Single	1
249951	67600945	Case ASSY Control(Indoor)	1
W6640A	67601403	Connector Terminal Block	1
135500A	67601510	Cover	1
135500C	67601515	Cover	1
135080	67601804	Decor	1
354212	67602016	Evaporator ASSY Final	1
354210	67602017	Evaporator ASSY First	1
359011	67602120	Fan ASSY Cross Flow	1
152302	67602213	Filter Air	2
135316	67602535	Grille ASSY Front(Indoor)	1
135313	67602536	Grille ASSY Inlet	1
135311	67602537	Grille ASSY Discharge(Indoor)	1
149303	67602706	Holder Tubing	1
149304	67602707	Holder Evaporator	1
352150	67602806	Hose ASSY Drain	1
147582	67603205	Louver Vertical	12
147581	67603209	Louver Horizontal	1
146811B	67603317	Motor ASSY DC Stepping	1
146811B	67603317	Motor ASSY DC Stepping	1
346810	67603329	Motor DC	1
146811A	67603335	Motor ASSY DC Stepping	1
268711G	67603924	PCB ASSY Sub	1
268711H	67603931	PCB ASSY Sub	1
268711D	67603932	PCB ASSY Option	1
249951	67603955	PCB ASSY Main	1
733010	67604002	Plate ASSY Installation	1
267110	67604310	Remote Controller ASSY	1
263230C	67604808	Thermistor ASSY NTC	1
263230B	67604818	Thermistor ASSY NTC	1
35211B	67605005	Tube ASSY Tubing	1
342800	67606700	Bearing	1

# Outdoor Unit



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## Outdoor Unit

MRH12Y3J			
Location	Part Number	Description	Qty
447910	67600307	Barrier ASSY Outdoor	1
430410	67600607	Base ASSY Outdoor	1
349600	67600717	Bracket ASSY Motor	1
649950	67600930	Case ASSY Control(Outdoor)	1
661400	67601104	Coil Expansion	1
554160	67601205	Compressor Set Korea	1
554031	67601311	Condenser ASSY Bending	1
W6640	67601405	Connector Terminal Block	1
135500	67601506	Cover	1
435511B	67601605	Cover ASSY Control(Outdoor)	1
435512	67601614	Cover ASSY Top(Outdoor)	1
550140	67601704	Damper Compressor	3
561410	67601904	Drawing ASSY	1
559010	67602116	Fan Propeller	1
W4986	67602411	Gasket	1
435301	67602538	Grille Discharge	1
W6631	67602607	Harness Multi	1
546810	67603334	Motor DC Outdoor	1
152503	67603500	Nipple Drain	1
349480	67603601	Orifice	1
437211	67603806	Panel ASSY Front(Outdoor)	1
437212	67603818	Panel ASSY Rear(Outdoor)	1
237202	67603838	Panel Front	1
268711C	67603933	PCB ASSY Main	1
W49810	67604614	Supporter	1
263230B	67604817	Thermistor ASSY NTC	1
263230A	67604828	Thermistor ASSY NTC	1
261704	67604903	Transformer Reactor	1
55211G	67605904	Tube ASSY Expansion	1
552116	67606110	Tube ASSY Reverse	1
552200	67606301	Valve Expansion Body	1
552202	67606403	Valve Reverse	1
552203B	67606501	Valve Service	1
552203A	67606515	Valve Service	1



**FRIEDRICH**

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P/No. : 960-914-07