



**FRIEDRICH**

1883

# Multi Zone Air Conditioner SVC MANUAL (Exploded View)

## DUCTLESS SPLIT SYSTEMS

### **CAUTION**

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

MODEL: MR24DY3JM

THE EXPERTS IN ROOM AIR CONDITIONING

960-920-03

# 1. Specification

Outdoor Spec.			MR24DY3JM	
Capacity(*)		Btu/h Class	24000	
Nominal Input	Cooling	kW	0.39~1.43~3.09	
(Min~Rated~Max)	Heating	kW	0.42~2.21~3.10	
Running Current	Cooling	A	2.8~6.6~14.0	
	Heating	A	3.0~10.2~14.1	
Starting Current	Cooling/Heating	A	-	
Power Supply	Ø / V / Hz		1/208-230/60	
Power Supply Cable (outdoor)	No. x AWG		3 x 12	
transmission cable (outdoor to indoor)	No. x AWG		4 x 18 (Including Earth)	
Dimensions	W x H x D	mm	870 x 808 x 320	
		inch	34-1/4 x 31-13/16 x 12-19/32	
Net Weight	kg(lbs)		59(130.1)	
Net Weight(Package)	kg(lbs)		63(139)	
Compressor	Type		Twin-Rotary	
	Qty x Model		1 x GJT240D	
	Motor Type		BLDC	
	Oil Charge volume	cc	900	
	Oil Type		FVC68D	
Refrigerant	Charge (at 7.5m)	g(oz)	2100(74.1)	
	Type		R410A	
	Control		EEV	
Heat Exchanger	(Rows x Column x FPI) x No.		(2R x 36C x 16) x 1	
	Defrosting Method		Reversing cycle	
Fan	Type		Propeller	
	Motor Output(W) x No. of Unit		84 x 1	
	Capacitor	µF/Vac	-	
	Drive		DC	
	Discharge direction(Side/Top)		Side	
	Air Flow Rate * No. of Fan	CMM(CFM)	53(1872)	
Sound Level(H)	Sound Pressure	dB(A)+3	51	
	Piping connections	Liquid(Cycle A)	mm(inch)	6.35(1/4) x 3EA
		Gas(Cycle A)	mm(inch)	9.52(3/8) x 3EA
Piping Length spec.	Main Piping	m(ft.)	75(246.1)	
	Total Branch Piping	m(ft.)	25(82)	
	Each Branch Piping	m(ft.)	37.5(123.0)	
Max. Elevation Difference	Outdoor Unit~Indoor Unit	m(ft.)	15(49.2)	
	Indoor Unit~Indoor Unit	m(ft.)	7.5(24.6)	
Operation Range	Cooling	°C(°F)	-10 ~ 46(14~114.8)	
	Heating	°C(°F)	-15 ~ 24(5~75.2)	

## Note:

- Capacities are based on the following conditions:  
 Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB  
 - Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB  
 Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB  
 - Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB  
 Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)  
 - Level Difference of Zero

### Conversion Formula

$$\text{kW} = \text{Btu/h class} \times 0.0002931$$

$$\text{cfm} = \text{CMM} \times 35.3$$

- Wiring cable size must comply with the applicable local and national code.
- The specification may be subject to change without prior notice for purpose of improvement.
- At least two indoor units should be connected.
- For more Capacity(\*), refer to the combination table

## 2. Function Table

Category	Function	A3UW243FA2 [MR24DY3JM]
Reliability	Defrost / Deicing	O
	High pressure switch	X
	Low pressure switch	O
	Phase protection	X
	Restart delay (3-minutes)	O
	Self-diagnosis	O
	Soft start	O
	Test function	O
Convenience	Auto operation(Artificial intelligence)	O
	Auto restart operation	O
CAC network function	Network solution (LGAP)	X
	PDI(Power Distribution Indicator)	X
	PI485	X
Special function kit	Low ambient operation	O (Program logic)
Others	Thermistor	-

**Note :**

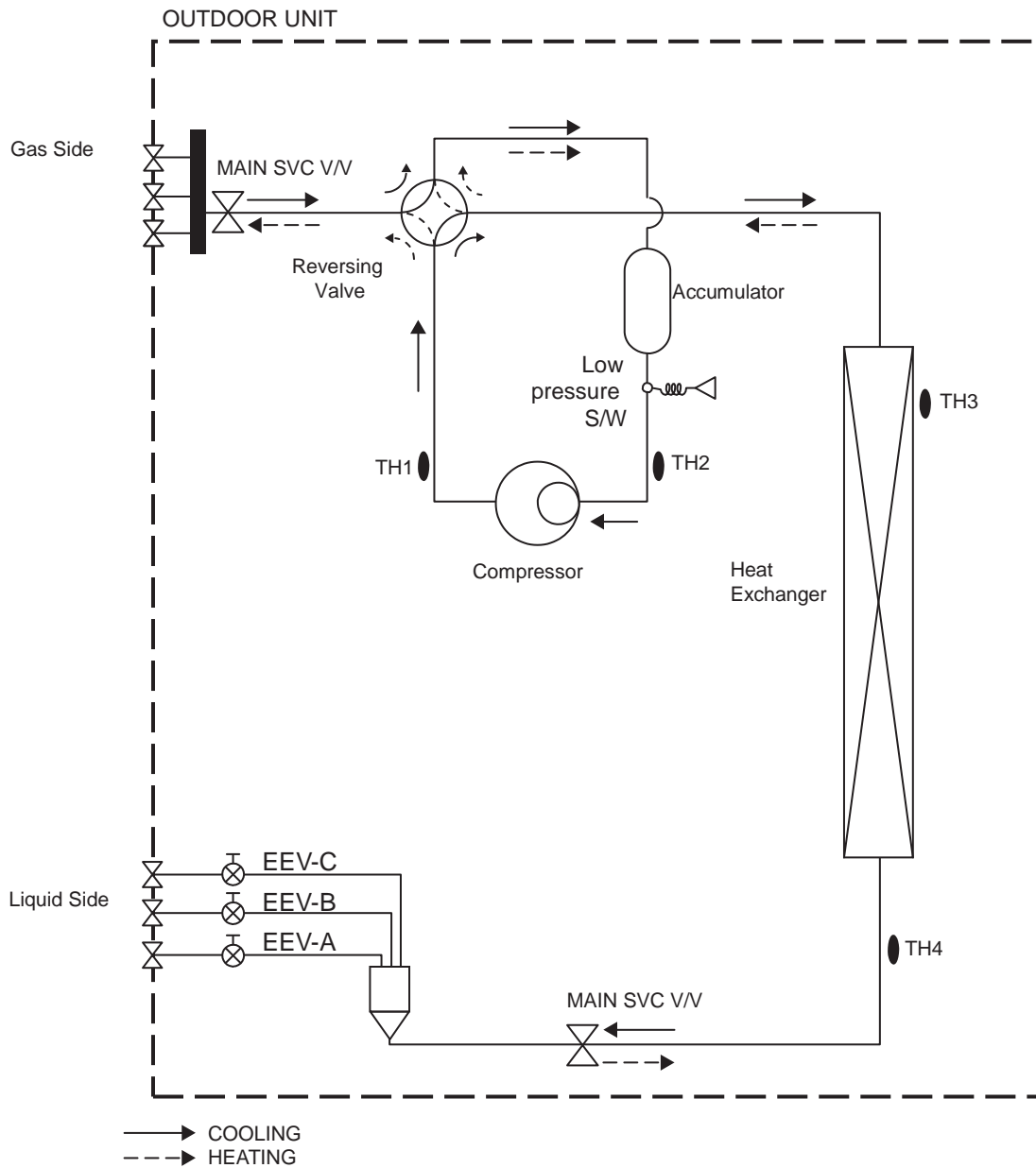
O : Applied    X : Not applied    - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package

H : These safety switcher are standard or optional features depending on region & country

### 3. Piping Diagrams

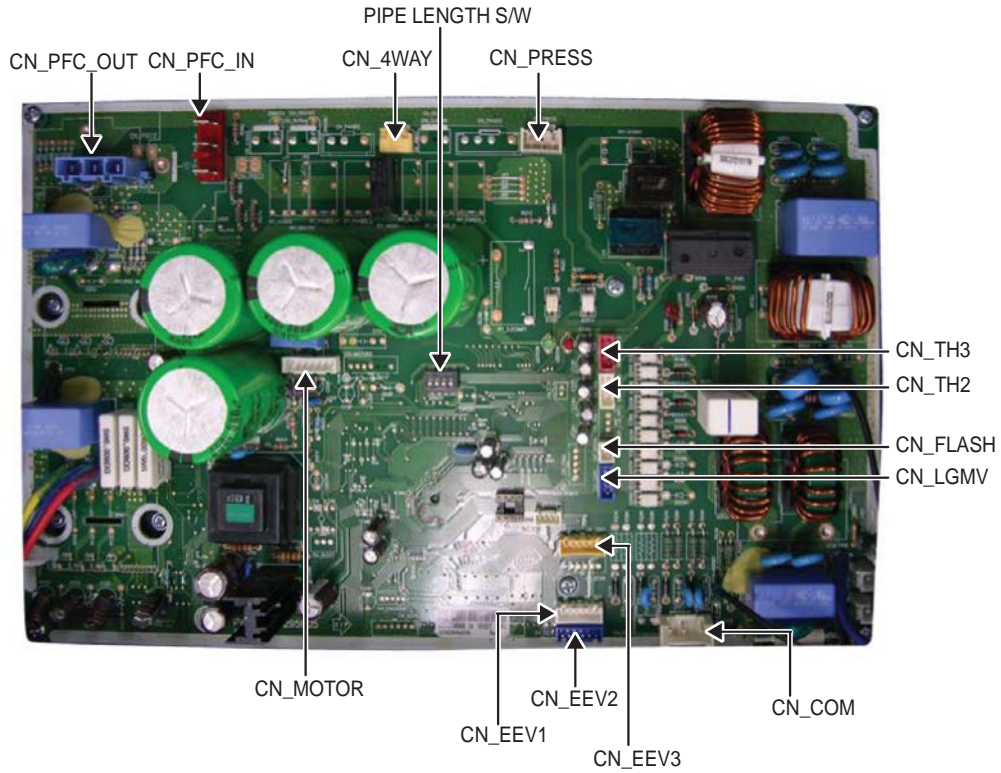
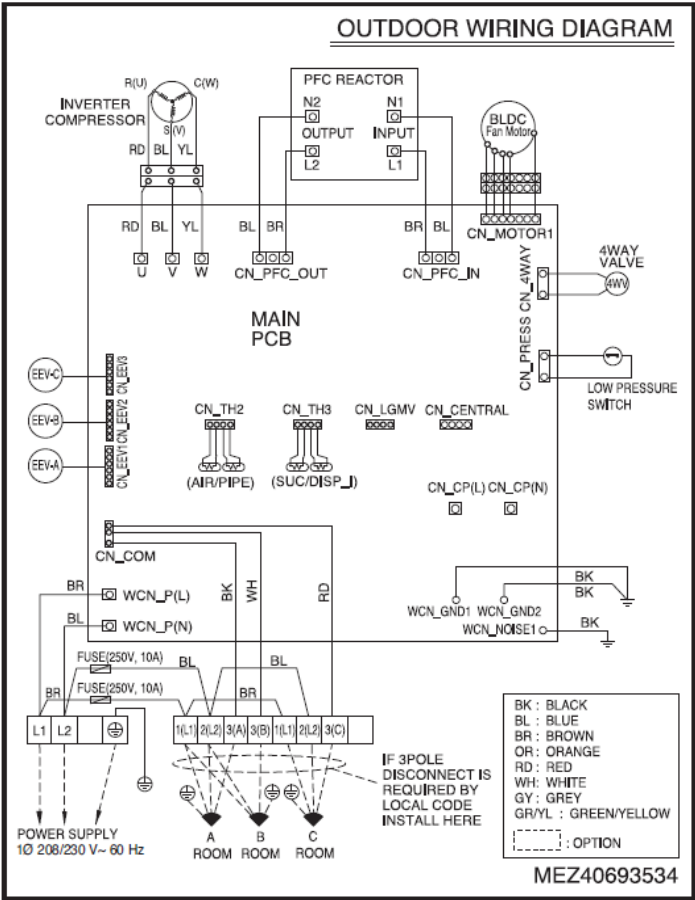


**Note:**

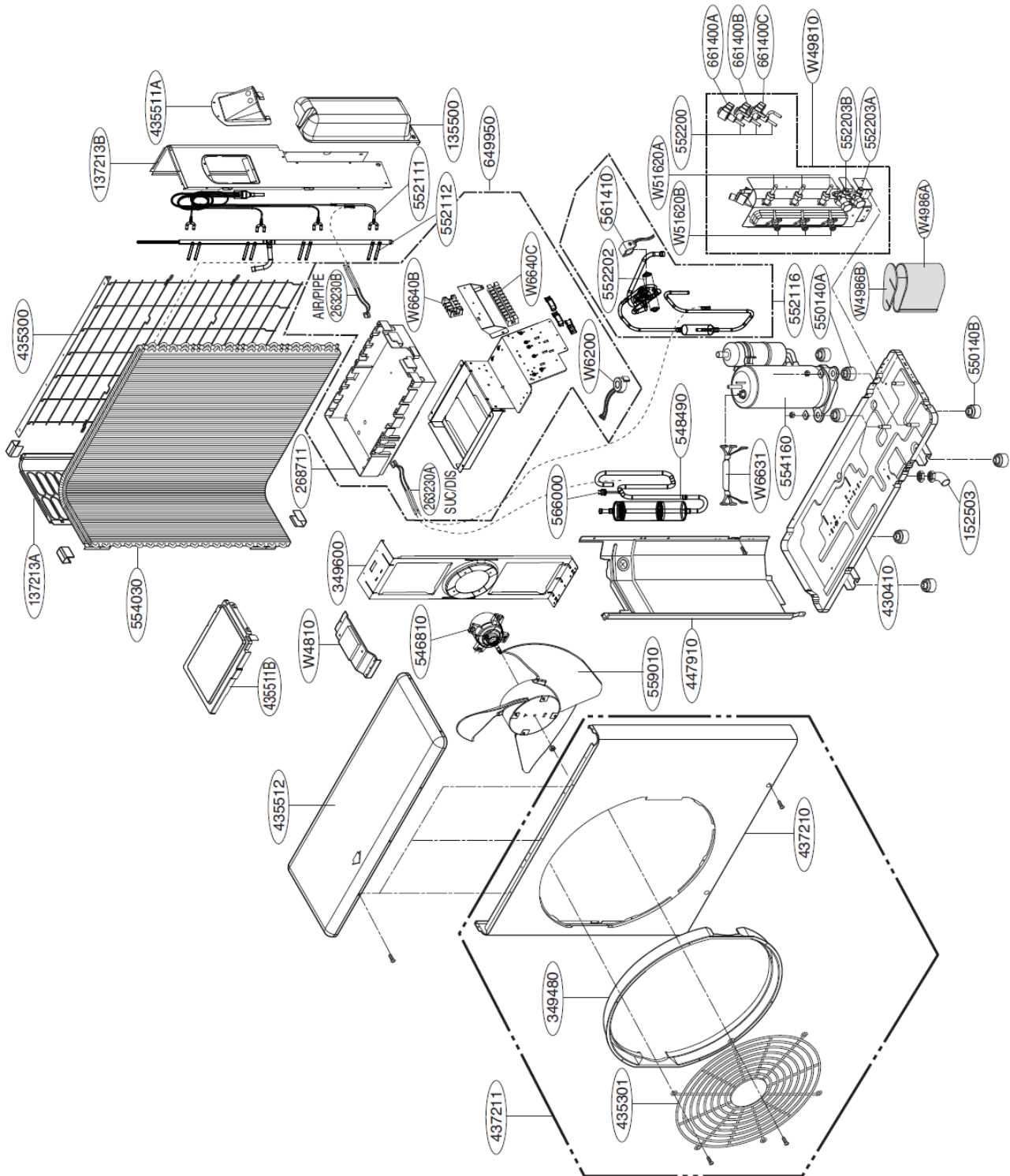
EEV: Electronic Expansion Valve

LOC.	Description	PCB Connector
Th1	Thermistor for discharge pipe temperature	CN_TH3
Th2	Thermistor for suction pipe temperature	CN_TH3
Th3	Thermistor for outdoor air temperature	CN_TH2
Th4	Thermistor for condensing temperature	CN_TH2

# 4. Wiring Diagrams



## 5. Exploded View



Model	Classification	Description	Part Number	Location Number
MR24DY3JM	Heating	Compressor	EAD413446203	W6631

**Model : MR24DY3JM**

<b>Loc No.</b>	<b>Description</b>	<b>Friedrich Part #</b>
437210	Panel Assembly,Front(Sub)	67603809
349600	Bracket,Motor	67600712
W4986A	Gasket	67602400
W4986B	Gasket	67602401
435512	Cover Assembly,Top(Outdoor)	67601610
435511B	Cover Assembly,Control(Outdoor)	67601606
137213B	Panel Assembly,Side	67603821
W4810	Bracket	67600700
548490	Accumulator Assembly	67600101
349480	Orifice	67603601
550140B	Damper,Compressor	67601701
550140A	Damper,Compressor	67601702
152503	Nipple,Drain	67603500
W51620A	Socket,Flare	67604402
552116	Tube Assembly,Reverse	67606100
552111	Tube Assembly,Capillary	67605100
552203A	Valve,Service	67606508
552203B	Valve,Service	67606509
552203B	Valve,Service	67606510
552200	Valve,Expansion Body	67606301
552202	Valve,Reverse	67606401
552202	Valve,Reverse	67606403
566000	Switch,Pressure	67604701
W6640C	Connector,Terminal Block	67601405
661400A	Drawing,Assembly	67601900
661400B	Drawing,Assembly	67601901
661400C	Drawing,Assembly	67601902
447910	Barrier Assembly,Outdoor	67600301
430410	Base Assembly,Outdoor	67600603
649950	Case Assembly,Control(Outdoor)	67600917
554030	Condenser Assembly,First	67601304
435511A	Cover Assembly,Control(Outdoor)	67601608
437211	Panel Assembly,Front(Outdoor)	67603802
137213A	Panel Assembly,Side	67603828
W49810	Supporter Assembly	67604607
552112	Tube Assembly,Condenser(In)	67605300
W6631	Harness,Multi	67602603
561410	Drawing,Assembly	67601906
W6640B	Connector,Terminal Block	67601411
W6200	Filter,Line Noise	67602211
546810	Motor,DC	67603334
263230B	Thermistor Assembly,NTC	67604812
263230A	Thermistor Assembly,NTC	67604815
268711	PCB Assembly,Main	67603912
135500	Cover	67601504
559010	Fan,Propeller	67602114
435300	Grille,Rear	67602517
435301	Grille,Discharge	67602513
W51620B	Socket,Flare	67604403
554160	Compressor Set,Korea	67601201



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