



**FRIEDRICH**

1883

# Single 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: MR24UY3J

THE EXPERTS IN ROOM AIR CONDITIONING

960-920-09

# 1. Specification

## Indoor Unit

Indoor Unit				MC24Y3J	MD24Y3J
Capacity	Cooling	Min. ~ Rated ~ Max.	kW	2.84 ~ 7.03 ~ 7.81	2.84~7.03~7.81
		Min. ~ Rated ~ Max.	Btu/h	9,700 ~ 24,000 ~ 26,700	9,700~24,000~26,700
	Heating	Min. ~ Rated ~ Max.	kW	3.20 ~ 7.91 ~ 8.80	3.20~7.91~8.80
		Min. ~ Rated ~ Max.	Btu/h	10,900 ~ 27,000 ~ 30,000	10,900~27,000~30,000
Power Input	Cooling	Rated	kW	1.91	2.00
	Heating	Rated	kW	2.30	2.28
Running Current	Cooling	Rated	A	10.5	12.2
	Heating	Rated	A	14.2	16.0
EER / COP			Btu/h-W	12.05 / -	12.0/-
SEER / HSPF			Btu/h-W	17.00 / 9.70	17.00 / 10.00

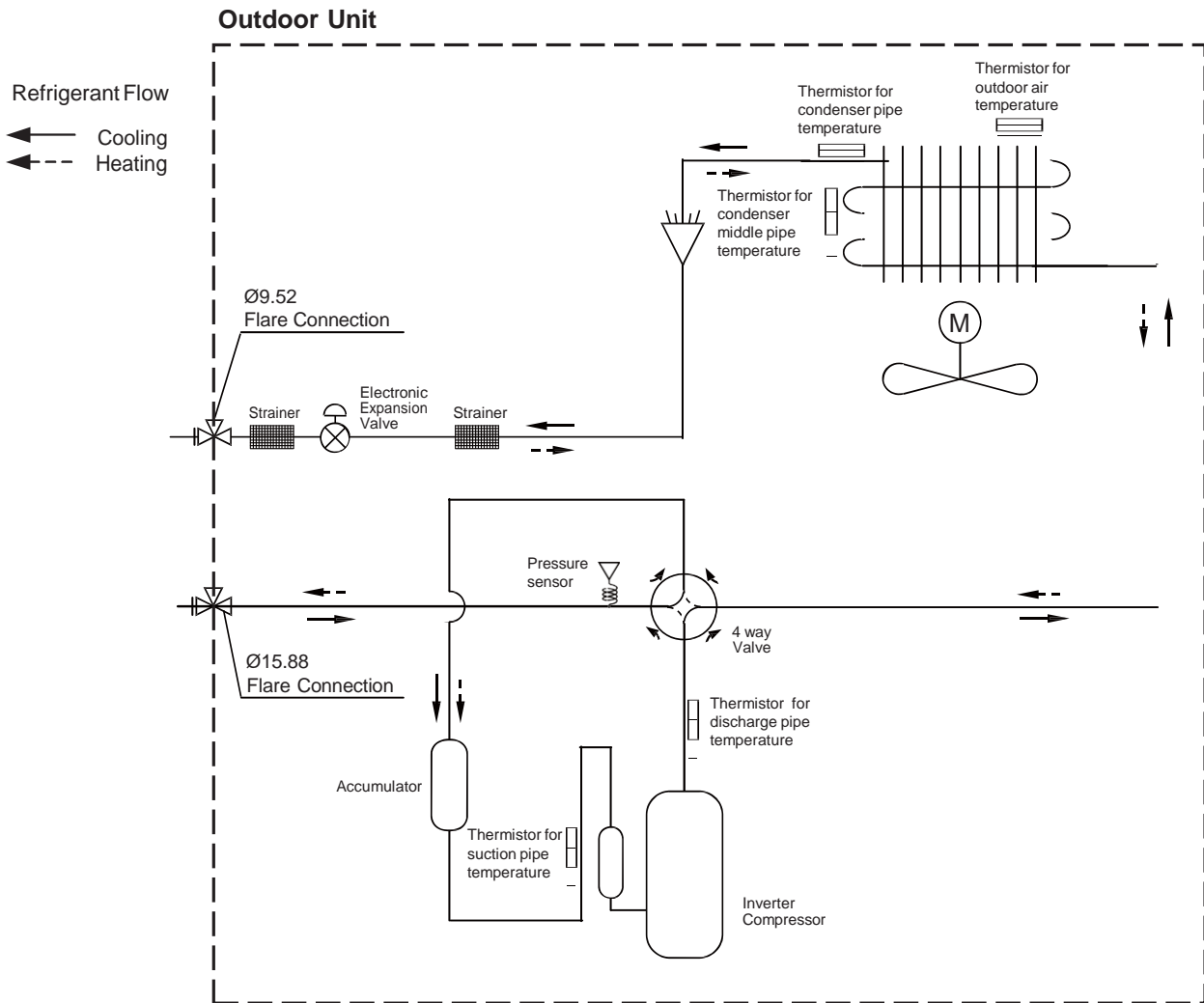
## Outdoor Unit

Outdoor unit				MR24UY3J	
Power Supply			V, Ø, Hz	1 / 208/230 / 60	
Starting Current	Cooling	Max.	A	-	
	Heating	Max.	A	-	
Wiring Connections	Power Supply Cable (included Earth)		No. x mm <sup>2</sup> (AWG)	3C x 2.5	
Casing Color			-	Warm Gray	
Dimensions	W x H x D		mm	834 x 950 x 330	
	W x H x D		inch	32-27/32 x 37-13/32 x 13	
Net Weight			kg (lbs)	60 (132.3)	
Compressor	Type		-	Twin Rotary	
	Model		Model x No.	GJT240MAA x 1	
	Motor type		-	BLDC	
	Motor Output		W x No.	2,137 x 1	
Refrigerant	Type		-	R410A	
	Precharged Amount		g (oz)	2,000	
	Chargeless-Pipe Length		m (ft)	7.5 (24.6)	
	Additional Charging Volume		g/m (oz/ft)	40 (0.43)	
Control			-	Electronic Expansion Valve	
Refrigerant Oil	Type		-	FVC68D	
	Charged volume		cc x No.	900 x 1	
Heat Exchanger			(Row x Column x Fins per inch) x No.	(2 x 38 x 14) x 1	
Fan	Type		-	Propeller	
	Air Flow Rate		m <sup>3</sup> /min(ft <sup>3</sup> /min) x No.	58(2048) x 1	
Fan Motor	Type		-	BLDC	
	Output		W x No.	124 x 1	
Sound Pressure Level	Cooling	Rated	dB(A)	48	
	Heating	Rated	dB(A)	52	
Sound Power Level	Cooling	Rated	dB(A)	62	
Piping Connections	Liquid	Outer Dia.	mm(inch)	Ø 9.52 (3/8)	
	Gas	Outer Dia.	mm(inch)	Ø 15.88 (5/8)	
Piping Length		Max.	m (ft)	50 (164.0)	
Maximum Height Difference	Outdoor Unit ~ Indoor Unit		Max.	m (ft)	30 (98.4)
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-15 (5.0) ~ 48 (118.4)	
	Heating	Min. ~ Max.	°C WB (°F WB)	-18 (-0.4) ~ 18 (64.4)	

### Note:

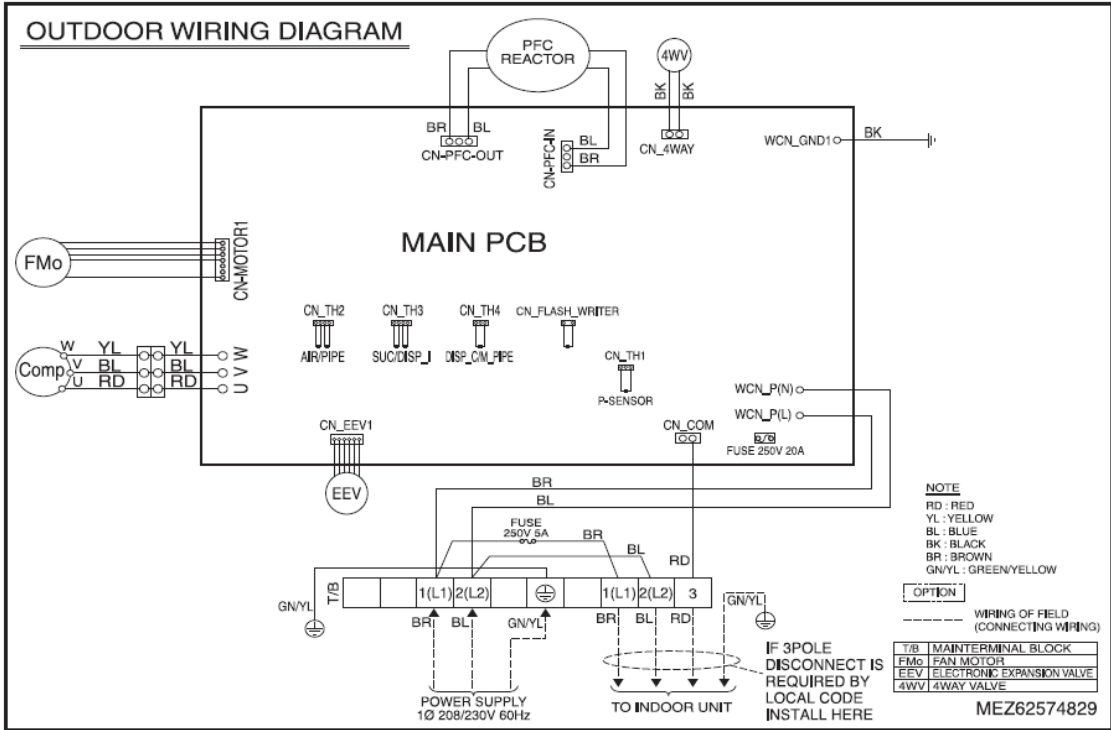
- All data are based on the following conditions:
  - Cooling Temperature : Indoor 26.7°C(80°F) DB / 19.4°C(67°F) WB  
Outdoor 35°C(95°F) DB / 23.9°C(75°F) WB
  - Heating Temperature : Indoor 21.1°C(70°F) DB / 15.6°C(60°F) WB  
Outdoor 8.33°C(47°F) DB / 6.11°C(43°F) WB
  - Piping Length : Interconnected Pipe Length = 7.5m
  - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
- Wiring cable size must comply with the applicable local and national code.
- Due to our policy of innovation some specifications may be changed without notification.
- Sound Level Values are measured at Anechoic chamber.  
Therefore, these values can be increased(maximum 3dB(A)) owing to ambient conditions during operation.

## 2. Piping Diagrams

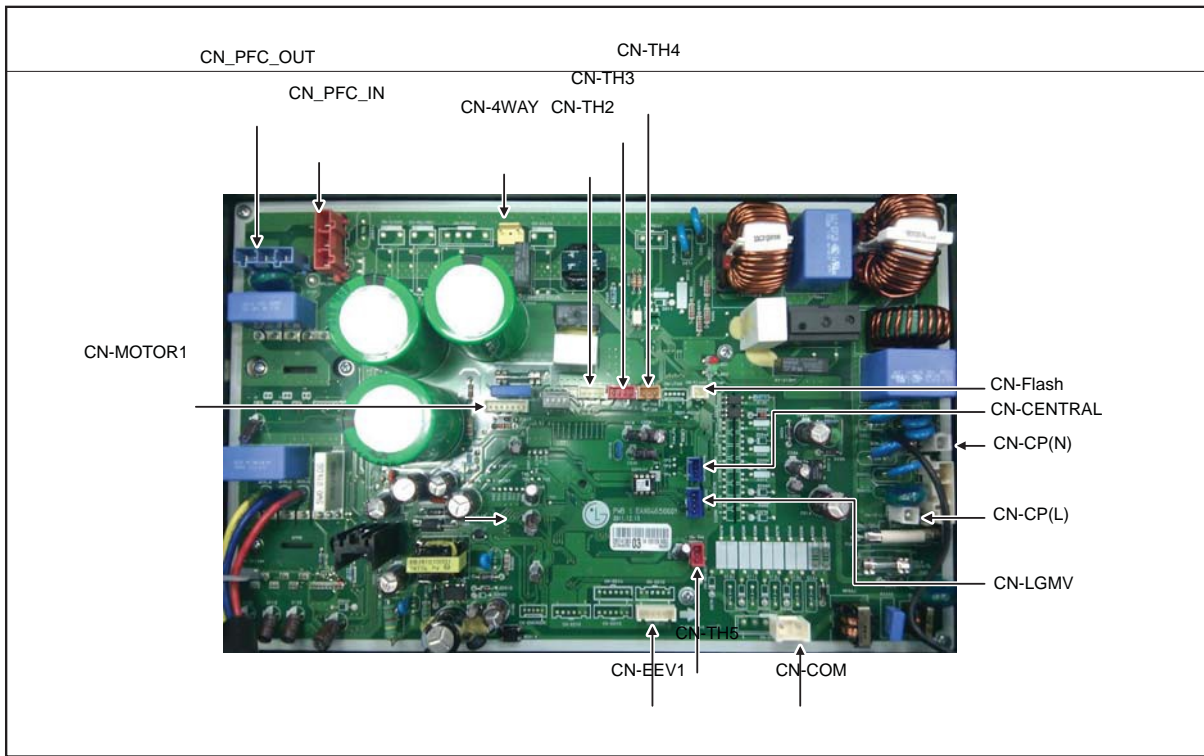


Description	PCB Connector
Electronic Expansion Valve	CN-EEV1
Thermistor for suction pipe temperature	CN-TH3
Thermistor for discharge pipe temperature	CN-TH3
Thermistor for condenser pipe temperature	CN-TH2
Thermistor for outdoor air temperature	CN-TH2
Thermistor for condenser middle pipe temperature	CN-TH4
Pressure sensor	CN-TH1

# 3. Wiring Diagrams



## MAIN PCB





---

**Model: MR24UY3J**

<b>Loc No.</b>	<b>Description</b>	<b>Friedrich Part #</b>
548490	Accumulator	67600100
447910	Barrier Assembly, Outdoor	67600305
430410	Base Assembly, Outdoor	67600601
549610	Bracket Assembly ,Motor(Outdoor)	67600711
649950	Case Assembly, Control(Outdoor)	67600926
661400	Coil, Expansion	67601104
554030	Condenser Assembly ,First	67601308
W6640	Connector, Terminal Block	67601400
135500	Cover	67601503
435512	Cover Assembly, Top(Outdoor)	67601612
435513	Cover Assembly, Tubing	67601616
550140B	Damper, Compressor	67601701
550140A	Damper, Compressor	67601703
561410	Drawing, Assembly	67601906
559010	Fan ,Propeller	67602117
W6200	Filter, Line Noise	67602212
669010	Fuse Assembly	67602303
W4986A	Gasket	67602407
W4986B	Gasket	67602408
435301	Grille ,Discharge	67602511
435300	Grille, Rear	67602519
W6631	Harness ,Multi	67602604
546810	Motor Assembly, DC,Indoor	67603308
546810	Motor Assembly, DC,Outdoor	67603314
552560	Muffler	67603400
152503	Nipple, Drain	67603500
349480	Orifice	67603602
437211	Panel Assembly, Front(Outdoor)	67603808
437212	Panel Assembly, Rear(Outdoor)	67603819
137213A	Panel Assembly, Side	67603830
137213B	Panel Assembly, Side	67603842
237202	Panel, Front	67603835
237205	Panel, Rear	67603840
268711	PCB Assembly	67603901
265021	Plug, Fusible	67602303
554160	QJ-T	67604200
165010	Sensor, Pressure	67607400
148000	Supporter	67604602
263230A	Thermistor Assembly, NTC	67604803
263230C	Thermistor Assembly, NTC	67604812
263230B	Thermistor Assembly ,NTC	67604815
55211E	Tube Assembly, Check Valve	67605200
552113	Tube Assembly ,Condenser(Out)	67605308
552115	Tube Assembly, Menifold(Outdoor)	67606010
552116	Tube Assembly, Reverse	67606103
552117	Tube Assembly, Suction(Outdoor)	67606203
552200	Valve, Expansion Body	67606302
552202	Valve, Reverse	67606403
552203A	Valve, Service	67606511
552203B	Valve, Service	67606514



**FRIEDRICH**

Friedrich Air Conditioning Co. | 10001 Reunion Place, Suite 500 | San Antonio, TX 78216 | 877.599.5665  
[www.friedrich.com](http://www.friedrich.com)