

MXZ-SM48NL

48,000 BTU/H HEAT PUMP OUTDOOR UNIT



Job Name:

System Reference:

Date:



GENERAL FEATURES

- Compatible with M- and P-Series and CITY MULTI® indoor units (branch box required for connection with M- and P-Series)
- Compressor overcurrent detection
- Compressor thermal protection
- Fan motor overheating/voltage protection
- High pressure protection
- INVERTER-driven compressor: Compressor generates the precise capacity needed to maintain a temperature set point.
- Quiet operation: Outdoor units are as quiet as a typical conversation, and most indoor units are whisper quiet.
- Seacoast protection: Seacoast protection on heat exchanger and base panel (rated for 2,000 hrs. in accordance with ASTM B117 testing)
- Thermal Differential 1°F

Specifications			System
Unit Type			MXZ-SM48NL
Cooling at 95F ¹ (Non-Ducted // Mixed // Ducted)	Maximum Capacity	Btu/h	48,000 // 48,000 // 48,000
	Rated Capacity	Btu/h	48,000 // 48,000 // 48,000
	Minimum Capacity	Btu/h	15,000 // 15,000 // 15,000
	Maximum Power Input	W	4,000 // 4,710 // 5,715
	Rated Power Input	W	4,000 // 4,710 // 5,715
	Power Factor (208V)	%	98.60 // 98.60 // 98.60
	Power Factor (230V)	%	98.60 // 98.60 // 98.60
Heating at 47F ² (Non-Ducted // Mixed // Ducted)	Maximum Capacity	Btu/h	50,000 // 50,000 // 50,000
	Rated Capacity	Btu/h	50,000 // 50,000 // 50,000
	Minimum Capacity	Btu/h	13,000 // 13,000 // 13,000
	Maximum Power Input	W	3,665 // 4,140 // 4,730
	Rated Power Input	W	3,665 // 4,140 // 4,730
	Power Factor (208V)	%	98.60 // 98.60 // 98.60
	Power Factor (230V)	%	98.60 // 98.60 // 98.60
Heating at 17F ³ (Non-Ducted // Mixed // Ducted)	Maximum Capacity	Btu/h	43,000 // 43,000 // 43,000
	Rated Capacity	Btu/h	31,400 // 32,400 // 33,400
	Maximum Power Input	W	6,305 // 6,705 // 7,160
	Rated Power Input	W	3,410 // 3,740 // 4,080
Heating at 5F ⁴ (Non-Ducted // Mixed // Ducted)	Maximum Capacity	Btu/h	35,400 // 35,400 // 35,400
	Maximum Power Input	W	4,940 // 5,140 // 5,295
Heating at -13F ⁵ (Non-Ducted // Mixed // Ducted)	Maximum Capacity	Btu/h	22,800 // 22,800 // 22,800
	Maximum Power Input	W	4,455 // 4,455 // 4,455
Efficiency (Non-Ducted // Mixed // Ducted)	SEER ² ¹		23 // 20 // 17
	EER ² ¹		12 // 10.20 // 8.40
	HSPF ² (IV) ²		10.40 // 9.95 // 9.50
	COP at 47°F ²		4 // 3.55 // 3.10
	COP at 17°F at Maximum Capacity ³		2 // 1.88 // 1.76
	COP at 5°F at Maximum Capacity ⁴		2.10 // 2.02 // 1.96
	ENERGY STAR® Certified		Yes // No // No

NOTES

¹Cooling at 95°F (Indoor: 80°F DB, 67°F WB // Outdoor: 95°F DB, 75°F WB)

²Heating at 47°F (Indoor: 70°F DB, 60°F WB // Outdoor: 47°F DB, 43°F WB)

³Heating at 17°F (Indoor: 70°F DB, 60°F WB // Outdoor: 17°F DB, 15°F WB)

⁴Heating at 5°F (Indoor: 70°F DB, 60°F WB // Outdoor: 5°F DB, 4°F WB)

⁵Heating at -13°F (Indoor: 70°F DB, 60°F WB // Outdoor: -13°F DB, -14°F WB)

• Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

• A Maximum connected units reduced when PLA connected. Refer to manual for details

• B Branch box should be placed within the level between the outdoor unit and indoor units

• C 5°F DB - 115°F DB when optional wind baffles are installed

For actual capacity performance based on indoor unit type and number of indoor units connected, please refer to MXZ Operational Performance.

Although the maximum connectable capacity is 130%, the outdoor unit cannot provide more than 100% of the rated capacity.

Please utilize this over capacity capability for load shedding or applications where it is known that all connected units will NOT be operating at the same time.

** Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

• System cuts out in heating mode and automatically restarts at these temperatures.

SPECIFICATIONS: MXZ-SM48NL

Specifications			System
Unit Type			MXZ-SM48NL
Electrical	Electrical Power Requirements	V AC / V AC, , Hz	208 / 230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	230
	Short-circuit Current Rating (SCCR)	kA	5
	Recommended Fuse/Breaker Size if Branch Box Powered by Outdoor Unit	A	40
	Recommended Fuse/Breaker Size without Branch Box or Branch Box Powered Separate	A	30
	MCA if Branch Box Powered by Outdoor Unit	A	42
	MOCP if Branch Box Powered by Outdoor Unit	A	70
	MCA without Branch Box or Branch Box Powered Separate	A	36
	MOCP without Branch Box or Branch Box Powered Separate	A	64
Outdoor Unit	Fan Motor Output	W	70+70
	Defrost Method		Reverse Cycle
	Blue Fin Heat Exchanger Coating		Yes
	Sound Pressure Level, Cooling ¹	dB (A)	51
	Sound Pressure Level, Heating ²	dB (A)	54
	Compressor Type		Twin Rotary
	Compressor Model		MRB36FEGMC-L
	Compressor Motor Output	kW	3.4
	Compressor Oil Type // Charge	Type // oz	RM68EH // 78
	External Finish Color		Munsell 3Y 7.8/1.1
	Base Pan Heater		Optional
	Unit Dimensions (W x D x H)	inch [mm] inch [mm] inch [mm]	41-11/32 [1,050] 13 [330] 52-11/16 [1,338]
	Package Dimensions (W x D x H)	inch [mm] inch [mm] inch [mm]	43 [1,090] 18 [450] 58-5/16 [1,480]
	Unit Weight	lbs [kg]	250 [113]
	Package Weight	lbs [kg]	276 [125]
ODU Operating Temp. Range	Cooling Intake Air Temp (Maximum / Minimum ^c)	°FDB	115 / 23
	Cooling Thermal Lock-out / Re-start Temperatures	°FDB	N/A / N/A
	Heating Intake Air Temp (Maximum / Minimum)	°FDB	70 / -13
	Heating Thermal Lock-out / Re-start Temperatures**	°FDB	-24 / -14
Refrigerant	Type		R454B
	Pre-Charged Refrigerant Amount	lbs, oz	2, 11
IDU Connection	Maximum Number of Connected IDU with Branch Box ^A		8
	Maximum Number of Connected IDU without Branch Box		12
	Minimum Connected Capacity with Branch Box	Btu/h	12,000
	Minimum Connected Capacity without Branch Box	Btu/h	24,000
	Maximum connected capacity	Btu/h	62,400
Piping	Liquid Pipe Size O.D. (Flared)	inch [mm]	3/8 [9.52]
	Gas Pipe Size O.D. (Flared)	inch [mm]	5/8 [15.88]
	Total Piping Length when using Branch Box	ft [m]	492 [150]
	Total Piping Length without Branch Box	ft [m]	787 [240]
	Maximum Height Difference ^B , ODU above IDU	ft [m]	164 [50]
	Maximum Height Difference ^B , ODU below IDU	ft [m]	131 [40]
	Maximum Height Difference ^B , between branch boxes	ft [m]	39 [12]
	Maximum Height Difference between IDU and IDU without branch box	ft [m]	49 [15]
	Maximum Piping Length between ODU and Branch Box	ft [m]	180 [55]
	Farthest Piping Length from ODU to IDU with Branch Box	ft [m]	262 [80]
	Farthest Piping Length from ODU to IDU without Branch Box	ft [m]	262 [80]
	Farthest Piping Length after Branch Box	ft [m]	82 [25]
	Total Piping Length between Branch Boxes and IDU	ft [m]	312 [95]
	Maximum Number of Bends for IDU		15

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OUTDOOR UNIT ACCESSORIES: MXZ-SM48NL

Hail Guards	Hail Guard	HG-A2
Snow/Rain Diverter	SnowRain Diverter	SRD-5
Ball Valve	Refrigeration Ball Valve - 1/2	BV12FFSI2
	Refrigeration Ball Valve - 1/4	BV14FFSI2
	Refrigeration Ball Valve - 3/8	BV38FFSI2
	Refrigeration Ball Valve - 5/8	BV58FFSI2
Mini-Split Wire	14 Gauge 4 wire Armored MiniSplit Cable250 ft roll	SW144-250
	14 Gauge 4 wire Armored MiniSplit Cable50 ft roll	SW144-50
	14 Gauge 4 wire MiniSplit Cable250 ft roll	S144-250
	14 Gauge 4 wire MiniSplit Cable50 ft roll	S144-50
	16 Gauge 4 wire Armored MiniSplit Cable250 ft roll	SW164-250
	16 Gauge 4 wire Armored MiniSplit Cable50 ft roll	SW164-50
	16 Gauge 4 wire MiniSplit Cable250 ft roll	S164-250
Control Wire	M-Net Control Wire 1000 Roll 16-AWG Standard Twisted Pair Shielded Jacketed- Plenum rated	CW162S-1000
	M-Net Control Wire 250 Roll 16-AWG Standard Twisted Pair Shielded Jacketed- Plenum rated	CW162S-250
Port Adaptor	Adaptor 1/4 x 3/8	PAC-SJ87RJ-E
	Adaptor 12 x 38	PAC-SK88RJ-E
	Adaptor 12 x 58	PAC-SK89RJ-E
	Adaptor 38 x 12	ADP3812
	Adaptor 38 x 58	PAC-SK90RJ-E
Stand	18 Dual Fan Stand	QSMS1802M
	24 Dual Fan Stand	QSMS2402M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
	Outdoor Unit 3-14 inch Mounting Base Pair - Plastic	DSD-400P
	Outdoor Unit Stand 12 High	QSMS1202M
Wind Baffle	Front Wind Baffle	WB-PA3 (two pieces are required)
Branch Box	3 Port Branch Box	PAC-LMA30BC
	5 Port Branch Box	PAC-LMA50BC
	Branch Box Enclosure	BBE-1
Power Supplies & Auxiliary Components	3-Pin Wiring Harness	PAC-715AD
	5-Pin Wiring Harness	PAC-725AD
Control/Service Tool	Maintenance Tool Interface	PAC-USCMS-MN-1
Drain Socket	Drain Socket	PAC-SG60DS-E
Centralized Drain Pan	Centralized Drain Pan	PAC-SH97DP-E
Optional Defrost Heater	Optional Defrost Heater	PAC-SJ20BH-E
Mounting Pad	Condensing Unit Mounting Pad 24 x 42 x 3	ULTRILITE2
Distribution pipe	Brazed Connection	MSDD-50BR-E
	Flare Connection	MSDD-50AR2-E
Air Deflector	Vertical Air Deflector	ADV-1
Alarm Kit	Alarm Kit	PAC-SL54AL-E
	Alarm Kit Interface	PAC-IF55AL-E
Air Outlet Guide	Air Outlet Guide 1 Piece	PAC-SH96SG-E (two pieces are required)
NOTES		

METUS 2025-02 PROPIN

1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 <https://mitsubishicomfort.com>



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