MINI-SPLIT SYSTEMS

MS8-ZO-36P4

Lennox® 8 Series

3 Ton Multi-Zone Heat Pump - R-410A

PRODUCT SPECIFICATIONS

Bulletin No. 210681
September 2016
Supersedes January 2015

SEER - 16.00

MODEL NUMBER IDENTIFICATION

OUTDOOR UNITS

MS 8 - ZO - 36 P 4 A

- **Series Type** MS = Mini-Split
- **Major Revision**
- **Unit Type** ZO = Multi-Zone Heat Pump Outdoor Unit
- **Nominal Cooling Capacity** 36 = 3 tons
- **Voltage** P = 208/230V-1phase-60hz
- **Number of Zones** 4 = Four Zones
- **Minor Revision**

INDOOR UNITS

MS 8 - HI - 09 P 1 A

- **Series Type** MS = Mini-Split
- **Major Revision**
- **Unit Type** HI = Single Zone Heat Pump Indoor Unit
- **Nominal Cooling Capacity** 09 = 0.75 tons, 12 = 1 tons, 18 = 1.5 tons
- **Voltage** P = 208/230V-1phase-60hz
- **Number of Zones** 1 = One Zone
- **Minor Revision**

FEATURES - OUTDOOR UNITS

CONTENTS

EQUIPMENT WARRANTY

Compressor - Limited warranty for five years in residential installations and one year in non-residential installations.

All other covered components - Five years in residential installations and one year in non-residential installations.

Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

APPLICATIONS

SEER up to 16.00.

HSPF up to 8.20.

Single phase power supply.

Outdoor unit sound levels as low as 59 dB.

Ductless mini-split systems provide a wide range of capacities and applications and provide an alternative when a ducted system is impractical or cost prohibitive.

Depending on capacity, multi-zone heat pumps allow two, three, or four indoor units to be connected to one outdoor unit.

See AHRI System Matches.

Units shipped completely factory assembled, internally piped, and wired.

Installer must set outdoor unit, hang indoor unit, connect refrigerant lines, and make electrical connections to complete job.

APPROVALS

AHRI Certified to AHRI Standard 210/240-2008.

Tested in the Lennox Research Laboratory environmental test room.

Rated according to U.S. Department of Energy (DOE) test procedures.

Indoor and outdoor units and components within bonded for grounding to meet safety standards for servicing required by UL and CEC.

Units are ETL certified for the U.S. and Canada.

Meets 2014 Florida Building Code Wind Design Criteria:

- Ultimate Wind Speed – 186 miles per hour
- Risk Categories – III and IV
- Wind Exposures – C and D
- Mean Roof Heights – Up to 60 feet above ground

REFRIGERATION SYSTEM

R-410A Refrigerant

Non-chlorine, ozone friendly, R-410A.

Unit pre-charged with refrigerant.

Outdoor Coil

Aluminum fins fitted to copper tubes.

Wire grille guard provided.

Outdoor Fan

Direct drive fan moves large air volumes uniformly through entire condenser coil for high refrigerant cooling capacity.

Fan guard provided.

Refrigerant Line Connections, Service Valve

Flare connection lines are located on side of unit cabinet.

Fully serviceable brass service valve prevents corrosion and provide access to refrigerant system. Shut-off valve can be fully shut off while 2-way service valve (with service port) may be accessed to manage refrigerant charge while servicing system.

NOTE - Special Male Flare Adaptor is required to check operating pressures. See Optional Accessories table.

COMPRESSOR

Variable Frequency Rotary Compressor

Twin rotary compressor features high efficiency operation.

Balanced for reduced vibration and quiet operation.

Brushless DC motor uses powerful Neodymium magnets, which are approximately 15-20 times stronger than ferrite magnets used in conventional AC compressors.

Compressor Crankcase Heater

Protects against refrigerant migration that can occur during low ambient operation.

FEATURES - OUTDOOR UNITS

CONTROLS

DC Inverter Control
Provides continuous operation, while adjusting capacity according to room temperature.

The accurate sensing of cooling or heating loads prevents frequent changes in capacity and ensures efficient, economical operation.

Outdoor Unit Microprocessor
Electronic expansion valve control.

Automatic compressor timed-off protection (3 minutes).

Automatic fan delay in heating mode after coil is warm.

Temperature sensor(s).

LEDs on control display error codes and assist in troubleshooting.

Communication port to indoor unit.

4-Way reversing valve.

Electronic Expansion Valve
Furnished on all models.

Compressor Overcurrent Protection
Overcurrent protection can result due to any of the following:

- The ambient temperature is too high
- Locked rotor on the compressor
- Outdoor air is blocked or restricted

Condenser High Temperature Protection
Condenser high temperature can occur due to any of the following conditions:

- High outdoor ambient
- Outdoor fan blocked
- Outdoor coil blocked

The outdoor coil thermistor continuously monitors the temperature and communicates with the microprocessor.

Depending on the temperature measured, the compressor will be allowed to increase the frequency if needed to meet the load or is forced to run at the current or reduced frequency. If the temperature gets excessively high the compressor will be de-energized as shown below:

When the outdoor coil temperature drops to 124ºF, the unit will resume normal operations

NOTE - In heating mode the indoor fan is de-energized 60 seconds after the compressor is de-energized.

High Pressure Discharge Temperature Protection
The compressor discharge temperature can be high due to any of the following:

- Low refrigerant charge
- Blocked capillary

The compressor discharge line thermistor continuously monitors the temperature and communicates with the microprocessor.

Depending on the temperature measured, the compressor will be allowed to increase the frequency to meet the load or is forced to run at the current or reduced frequency. If the temperature gets excessively high, the compressor will be de-energized. When the compressor discharge temperature drops below 194ºF, the unit will resume normal operations.

Intelligent Power Module (IPM) Protection
Protects the unit from any of the following conditions:

- Loss of cooling to the heat sink
- High ambient temperature
- Low voltage

Terminal Strip
Furnished for easy wiring connections.

Defrost Control
Defrost cycle is automatically enabled if there is a build-up of frost on the outdoor coil. Outdoor fan and indoor blower operation is terminated during the defrost cycle.

H1 is displayed on the indoor unit panel on the front cover during a defrost cycle.

Reversing Valve
4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa.

Valve operates on pressure differential between outdoor unit and indoor unit of the system.

OUTDOOR UNIT CABINET

Constructed of heavy gauge steel.

Tabs on unit base allow secure mounting to slab.

Condensate drain outlets furnished on unit base for proper drainage. Drain connector (1 in.) furnished.

Access cover for power and control wiring connections.

Access cover for service valves.

FEATURES - INDOOR UNITS

INDOOR UNIT CABINET

High impact plastic cabinet.

Condensate drain outlets furnished on unit base. Drain must be field furnished.

Unit Display Panel (on Indoor Unit)

- Heat Indicator
- Cool Indicator
- Temperature/Error Code
- Power/Run
- Dehumidify Mode
- Infrared Signal Receptor (for wireless remote control)

Unit display can be turned off using the wireless remote control.

Wall Mounting Plate
Furnished for easy wall mounting of the indoor unit. See dimension drawing.

Air Deflection Louvers
Horizontal Louvers default to the cooling or heating position when the unit is operating.

Horizontal louvers can be set to a preset oscillating range or fixed position by pushing the “LOUVER SETTING” button ( ) on the wireless remote control.

Four oscillating settings and five fixed position settings. Full oscillating is the default setting when button pushed.

Vertical louvers can be manually adjusted to direct the airflow for optimal comfort.

Easy filter access.

INDOOR COIL

Copper tubes fitted to aluminum fins.

High efficiency wraparound design.

Condensate drain line (3 ft.) with barbed end is furnished with the indoor unit.

Drain line can be located on left side, right side, left rear, right rear (recommended) or bottom of unit.

BLOWER

Dual cross-flow centrifugal blower.

Aerodynamic spiralled blades for increased airflow and reduced sound levels.

Turbo Function
Unit runs at maximum speed to cool or heat the area quickly.

Cold Blow Prevention
Prevents cold air from blowing into a conditioned space during heating mode if the following occurs:

- If coil temperature is less than 106°F and indoor air temperature is less than 75°F there is a three-minute time delay before blower runs at low speed for five minutes.
- If coil temperature is equal to or more than 106°F and room temperature is equal to or more than 75°F blower runs at low speed for five minutes.

FILTER

Cleanable filter furnished as standard.

CONTROLS

Indoor Unit Microprocessor
Contains all necessary components to control system.

Terminal Strip
Furnished for easy wiring connections.

Indoor Coil Freeze Protection
When the unit is operating in the COOL or DEHUMIDIFICATION MODE, the indoor coil may freeze due to any of the following:

- Low system charge
- Reduced indoor airflow
- Restricted refrigerant flow
- Low ambient temperature (outdoor)
- Low load (indoor)

The indoor coil thermistor monitors the coil temperature continuously. Any time the coil temperature drops below 30°F, the compressor and the outdoor fan (30 seconds later) will be switched off until the coil temperature rises above 43°F and the compressor was off for a minimum of 3 minutes.

Auto Button Operation
If the wireless remote control is lost, damaged, or the batteries are exhausted, the AUTO button located inside the front cover on the indoor unit can be used to run the unit.

Auto Settings:

- Cooling Mode (setpoint 77°F)
- Heating Mode (setpoint 68°F)
- Fan Only Mode (runs continuously)
- Fan Speed (Auto)
- Oscillate (On)

WIRELESS REMOTE CONTROL (furnished)

Complete remote control of system. Maximum operating range is 25 ft.

POWER
Turns system on and off. Also overrides SLEEP function.

MODE
Select system operation modes (AUTO/COOL/ DEHUMIDIFICATION/FAN/HEAT). Default setting is AUTO.

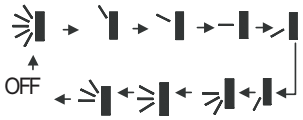
+/- (Plus/Minus) BUTTONS
Increase or decrease temperature in one degree increments.

NOTE - Temperature cannot be adjusted in AUTO mode.

FAN
Select fan speed (AUTO/LOW/MEDIUM/HIGH). Default setting is AUTO. Fan speed is displayed at the top of the control display.
NOTE - *Not adjustable during Dehumidification mode.*

I FEEL
Allows remote temperature sensing of the room at the remote control.

LOUVER SETTING
Sets the angle of the horizontal louvers. Four oscillating settings and five fixed position settings. Full oscillating is the default setting when button is first pushed.



CLOCK (24 Hour)
Set time on display. + and - buttons adjust time up or down.

TEMP
Set temperature and display current indoor ambient temperature temperature.

TIMER ON / TIMER OFF
TIMER ON (to start the unit at a preset time) and TIMER OFF (to stop the unit at a preset time) can be used separately or together. The clock on the wireless remote control must be set before using this function.

Pressing the + (plus) or – (minus) buttons sets time in one-minute increments. Press continuously for ten-minute increments.

Press TIMER ON or TIMER OFF again to cancel setting.

BLOW
Operates the indoor blower in COOL or DEHUMIDIFICATION mode for ten minutes to dry the indoor unit when unit is not operating.

Not available in AUTO, FAN or HEAT mode.

SLEEP
Used to conserve energy.

Cool Mode

After one hour of operation setpoint will be increased by 2°F.

After two hours setpoint will be increased by another 2°F and fan will operate on low speed.

Canceled by pushing the “SLEEP” button again.

Heat Mode

After one hour of operation setpoint will be decreased by 2°F.

After two hours setpoint will be decreased by another 2°F and fan will operate on low speed.

Canceled by pushing the “SLEEP” button again.

NOTE - SLEEP function is only available when the unit is in COOL or HEAT mode.

TURBO
Turns on blower to the maximum speed setting.

Canceled when switching modes or changing blower speeds.

LIGHT
Turns the LCD display backlight on the indoor unit on or off.

Additional Features
Pressing the + (plus) and – (minus) buttons simultaneously locks or unlocks the keypad to prevent tampering.

Fahrenheit or Celsius temperature display. When system is off press MODE and - (minus) buttons simultaneously to switch between Fahrenheit and Celsius

Operates on two AAA 1.5V batteries (furnished).

Optional Accessories

Wireless Remote Control Holder
Holder can be mounted on a wall for easy access. Mounting screws furnished.

OPTIONAL ACCESSORIES - ORDER SEPARATELY

OUTDOOR UNITS

Condenser Pad
Provides permanent foundation for outdoor units.

One-piece lightweight structural foam and molded from high-density polyethylene (HDPE), which makes them lightweight and easy to carry and install. The textured finish provides a non-skid surface so that the outdoor unit sits securely in one place. UV stable.

Disconnects
Positive unit disconnect. Single door enclosure. Fused and non-fused models available.

Fuses
30 and 60 amp fuses available.

Indoor/Outdoor Wiring Cable
(09 through 18 models only)
14-gauge, 4-conductor wire. THHN (Thermoplastic High Heat-resistant Nylon-coated) wire. Suitable for wet or dry locations. Rated up to 600V.

Refrigerant Line Sets
Refrigerant lines are shipped refrigeration clean. Lines are cleaned, dried, pressurized and sealed at factory.

Wall Brackets
Heavy duty 1/8 in. thick steel brackets for supporting outdoor units. Mount at any height to allow for easy maintenance under units. Pre-punched holes for easy installation. Powder coated gray finish. Load rating 600 lbs. per pair.

Whips
Heavy duty electrical whips are available in 8 and 10 gauge sizes. 6 ft. lengths. Weatherproof metal conduit.

Universal Mini-Split Installation Kit

Kit includes two-valve service manifold, premium 5 ft. hoses with ball valve, clutch type flaring tool, 6-in-1 metric torque wrench, imperial/metric hex tool, valve core tool, brass adaptors and brass caps, tool bag.

INDOOR UNITS

Condensate Mini-Split Drain Line
Constructed of flexible reinforced polypropylene,160 ft. roll.

Condensate Pump
Quietly and efficiently removes condensate.

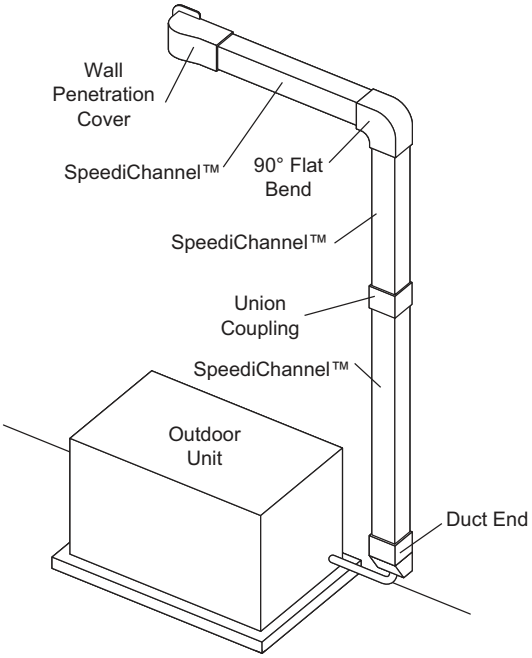
Designed to be installed above a false ceiling, behind wall-mounted evaporators or in plastic conduit.

ETL listed.

SPEEDICHANNEL™ SYSTEM

SpeediChannel™ is a channel system used to cover system line sets. The two-part system has a base and a cover. The base is fastened to a wall or ceiling with plastic clips (SpeediClip™) that snap into a channel already molded into the base. The cover fits on top of the base. SpeediChannel is manufactured from rigid PVC, which is UL rated and resistant to UV light. The system is a natural color that closely matches typical mini-split outdoor units. However, it can be painted as desired to match any wall color.

Typical Application



OPTIONAL ACCESSORIES - ORDER SEPARATELY

SPEEDICHANNEL™ SYSTEM (continued)

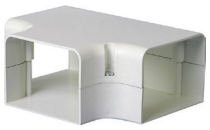
SpeediChannel™ Starter Kit
The starter kit includes (1) Coupling, (1) Wall Penetration, (1) Inside Elbow, (1) Long Radius Flat Bend, (10) SpeediclipsTM, (10) 11 in. Cable Ties, and (1) SpeediChannel Instruction Booklet.

Duct End
Duct Ends are used to terminate a run of SpeediChannel™ to a small opening just large enough for the line set and condensate drain line to pass through.

Flat Wall Escutcheon
Flat Wall Escutcheons are used to cover a rough opening in a soffit, wall, or ceiling penetration. One side of the escutcheon is flat to allow for a SpeediChannel™ to run along a wall and to penetrate through an adjacent wall or ceiling. This is the most common type of wall penetration. Furnished in two parts, the escutcheon easily snaps onto the SpeediChannel™.

Flex Joint
A Flex Joint is an accordion-style piece of SpeediChannel™. The flex joint can be extremely flexible when routing a SpeediChannel™ system around an obstacle. Each joint is 20 in. long and can be combined together for longer flex runs. The flex joint does not require the use of a union coupling. The flex joint slides tightly inside the SpeediChannel™ system.

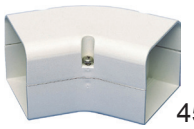
T-Joint
T-Joints are used for creating a tee connection between three pieces of SpeediChannel™. Each tee is individually packed and furnished with stainless steel screws.



Union Coupling
Union Couplings are used for joining two pieces of SpeediChannel™. Each coupling is individually packed and furnished with stainless steel screws.

Wall Penetration Cover
Wall penetration covers are used to transition from the SpeediChannel™ system to a through wall penetration. Wall covers are designed to allow for easy installation, even after the line set has been installed. A hooking and fastening arrangement allows for quick installation. Each wall cover is individually packed, and furnished with stainless steel screws to attach the wall cover to the base. Three screws are necessary to fasten the wall cover to the wall construction, regardless of the type of installed system.

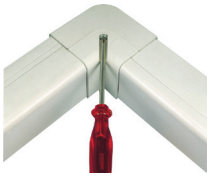
45° and 90° Flat Bend Elbows
45º Flat Bends are used to route the SpeediChannel™ around obstacles. Each bend is individually packed and furnished with stainless steel screws.



45°

90°

90° Inside Elbow
90º Inside Elbows are used to route the SpeediChannel™ around an inside corner. Each elbow is individually packed and furnished with stainless steel screws.



Mount Block White Qty. (2) 14 in. and (2) 36 in.
Mount Blocks are used as mounting bases when outdoor units must be bolted down. End caps (for aesthetics) come furnished with mounting bolts. Maximum load capacity is 900 pounds per mounting block. Installation temperatures range from -4ºF to 140ºF. Mount blocks fit all mini-split outdoor units with a sliding rail feature.

SPECIFICATIONS - OUTDOOR UNIT

	Model No.	**MS8-ZO-36P4**
	Number of Zones	4
Ambient Temperature Operating Range - °F	Cooling	23 - 118
	Heating	5 - 80
Connections No. (in.)	Liquid line o.d. - flare	(4) 1/4
	Suction line o.d. - flare	(4) 3/8
Refrigerant (R-410A) furnished		6 lbs. 4 oz.
Outdoor Coil	Net face area - sq. ft.	10.9
	Tube diameter - in.	1/3
	Number of rows	2
	Fins per inch	18
Outdoor Fan Motor (cfm)	Diameter - in.	22
	No. of blades	3
	High	2200
	Standard	1600
	Low	1400
Outdoor Fan Motor (rpm)	High	820
	Standard	640
	Low	560
Shipping Data - lbs.		152

ELECTRICAL DATA

	Line voltage data - 60 hz - 1ph	208/230V
	[1] Max. overcurrent protection (amps)	45
	[2] Minimum circuit ampacity	26
Compressor	Rated load amps	21
[3] **Compressor Power Input (W)**		2200
Outdoor Fan Motor	Output (W)	120

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

[1] HACR type circuit breaker or fuse.

[2] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

[3] Rated Input

SPECIFICATIONS - INDOOR UNIT

	Model No.	**MS8-HI-09P1**	**MS8-HI-12P1**	**MS8-HI-18P1**
Connections (in.)	Liquid line o.d. - flare	1/4	1/4	1/4
	Suction line o.d. - flare	3/8	3/8	1/2
Indoor Blower Air Volume (cfm)	Maximum	305	335	500
	High	275	275	460
	Medium	255	255	385
	Low	220	220	325
Indoor Blower RPM (Cooling/Heating)	Maximum	1260/1320	1330/1350	1500/1500
	High	1100/1200	1100/1170	1200/1250
	Medium	950/1100	950/1050	1050/1150
	Low	750/950	750/950	900/1050
Indoor Coil	Net face area - sq. ft.	1.65	1.65	2.33
	Tube diameter - in.	1/4	1/4	1/4
	Number of rows	2	2	2
	Fins per inch	17	17	17
Indoor Blower	Diameter x Length	3.6 in. x 25.4 in.	3.6 in. x 25.4 in.	3.9 in. x 28 in.
	Type	Cross-flow	Cross-flow	Cross-flow
Shipping Data - lbs.		31	29	38

ELECTRICAL DATA

	Line voltage data - 60 hz - 1ph	208/230V	208/230V	208/230V
	Rated Load Amps	0.20	0.20	0.32
	Output (W)	20	20	20

OPTIONAL ACCESSORIES - ORDER SEPARATELY

Description		Catalog No.	Size 09	12	18	36
OUTDOOR UNIT						
Condenser Pad (18 x 36 x 2)		**48X92**	No outdoor units available in these sizes			•
Disconnects	30 amp, fused, 1 ph	**27P37**				•
	60 amp, non-fused, 1 ph	**27P39**				•
Fuses	30A	**83P75**				•
	60A	**83P77**				•
Line Sets	1/4 in. x 3/8 in. x 25 ft.	**90X53**				•
	1/4 in. x 3/8 in. x 50 ft.	**X0258**				•
	[1] 1/4 in. x 1/2 in. x 25 ft.	**90X52**				•
	[1] 1/4 in. x 1/2 in. x 50 ft.	**X0259**				•
Male Flare Adaptor	5/16 in. quick connect x 1/4 in. MF	**Y0576**				•
Wall Brackets	36 inch	**Y5021**				•
Whips	10 Gauge - 1/2 in. x 6 ft.	**29P54**				•
	8 Gauge - 3/4 in. x 6 ft.	**27P44**				•
INDOOR UNIT						
Condensate Pump - ClearVue Mini™ - 7.9 US gallons per hour, 35 ft. lift - 120/240V		**Y5170**	•	•	•	No indoor unit available in this size
Condensate Mini-Split Drain Line - 5/8 in. I.D. 160 ft.		**Y3401**	•	•	•	
Indoor/Outdoor Wiring Cable - 14 Gauge, 4 conductor wire, THHN, 250 ft.		**Y2067**	•	•	•	
Wireless Remote Control Holder		**Y5073**	•	•	•	
INSTALLATION KIT						
Universal Mini-Split Installation Kit		**Y3247**	•	•	•	•
SPEEDICHANNEL™ SYSTEM						
SpeediChannel™ Starter Kit - 4 in.		**Y3387**	No outdoor units available in these sizes			•
SpeediChannel - 4 in. x 6-1/2 ft.		**Y3388**				•
Union Coupling - 4 in.		**Y3389**				•
90° Flat Bend Elbow - 4 in.		**Y3390**				•
90° Inside Elbow - 4 in.		**Y3391**				•
45° Flat Bend Elbow - 4 in.		**Y3392**				•
Flex Joint - 4 in.		**Y3393**				•
T-Joint - 4 in.		**Y3394**				•
Duct End - 4 in.		**Y3395**				•
Flat Wall Escutcheon - 4 in.		**Y3396**				•
Wall Penetration Cover - 4 in.		**Y3399**				•
Mount Block (White) Qty, 2 - 14 in.		**Y3397**				•
Mount Block (White) Qty, 2 - 36 in.		**Y3398**				•

[1] Two 3/8 to 1/2 in. refrigerant line adaptors are furnished with MS8-ZO-36P4 outdoor unit for the suction line connection to the outdoor unit when 1/4 in. x 1/2 in. line sets are used with MS8-HI-18P1 indoor units.

NOTE - In system matches utilizing only one MS8-HI-18P1 indoor unit only one adaptor will be required.

See System Matches - Line Set Usage on Page 10 for additional information.

SYSTEM MATCHES - LINE SET USAGE

Outdoor Model	Number of Zones	Indoor Model	Line Set Required
[1] MS8-ZO-36P4	2 Zone	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	2 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
	2 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	2 Zone	(2) MS8-HI-12P1	(2) 1/4 in. x 3/8 in.
	2 Zone	(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	2 Zone	(2) MS8-HI-18P1	[1] (2) 1/4 in. x 1/2 in.
	3 Zone	(3) MS8-HI-09P1	(3) 1/4 in. x 3/8 in.
	3 Zone	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
		(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
	3 Zone	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	3 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(2) MS8-HI-18P1	[1] (2) 1/4 in. x 1/2 in
	3 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(2) MS8-HI-12P1	(2) 1/4 in. x 3/8 in.
	3 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	3 Zone	(3) MS8-HI-12P1	(3) 1/4 in. x 3/8 in.
	3 Zone	(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
		(2) MS8-HI-18P1	[1] (2) 1/4 in. x 1/2 in.
	3 Zone	(2) MS8-HI-12P1	(2) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	3 Zone	(3) MS8-HI-18P1	[1] (3) 1/4 in. x 1/2 in.
	4 Zone	(4) MS8-HI-09P1	(4) 1/4 in. x 3/8 in.
	4 Zone	(3) MS8-HI-09P1	(3) 1/4 in. x 3/8 in.
		(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
	4 Zone	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
		(2) MS8-HI-12P1	(2) 1/4 in. x 3/8 in.
	4 Zone	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
		(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	4 Zone	(3) MS8-HI-09P1	(3) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	4 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(3) MS8-HI-12P1	(3) 1/4 in. x 3/8 in.
	4 Zone	(1) MS8-HI-09P1	(1) 1/4 in. x 3/8 in.
		(2) MS8-HI-12P1	(2) 1/4 in. x 3/8 in.
		(1) MS8-HI-18P1	[1] (1) 1/4 in. x 1/2 in.
	4 Zone	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
		(2) MS8-HI-18P1	[1] (2) 1/4 in. x 1/2 in.
	4 Zone	(4) MS8-HI-12P1	(4) 1/4 in. x 3/8 in.

[1] Two 3/8 to 1/2 in. refrigerant line adaptors are furnished with MS8-ZO-36P4 outdoor unit for the suction line connection to the outdoor unit when 1/4 in. x 1/2 in. line sets are used with MS8-HI-18P1 indoor units.

NOTE - In system matches utlilizing only one MS8-HI-18P1 indoor unit only one adaptor will be required.

SYSTEM MATCHES

NOTES:

Per AHRI, the certified ratings for multi-zone mini-split systems are valid for all combinations of indoor units with the specific outdoor unit listed below and in the AHRI Directory of Certified Equipment. Please visit http://www.ahridirectory.org for further details.

Any system that is a combination of ALL NON-DUCTED indoor units (MS8-HI models) meets the rating requirement listed below.

AHRI Standard 210/240 Ratings								Indoor Unit Combinations			
Outdoor Model	Cooling Capacity	SEER	EER	Heat Capacity		HSPF Region IV	AHRI Ref. No.	Indoor Model	Cooling / Heating (Btuh)		
				High	Low				Zone 1	Zone 2	Zone 3
MS8-ZO-36P4	34,000	16.00	7.95	35,800	22,000	8.20	6484324	(2) MS8-HI-09P1	9,000/ 9,500	9,000/ 9,500	- - -
								(1) MS8-HI-09P1 (1) MS8-HI-12P1	9,000/ 9,500	12,000/ 13,000	- - -
								(1) MS8-HI-09P1 (1) MS8-HI-18P1	8,400/ 9,000	16,600/ 18,000	- - -
								(2) MS8-HI-12P1	12,000/ 13,000	12,000/ 13,000	- - -
								(1) MS8-HI-12P1 (1) MS8-HI-18P1	10,000/ 11,200	15,000/ 16,800	- - -
								(2) MS8-HI-18P1	12,800/ 14,300	12,800/ 14,300	- - -
								(3) MS8-HI-09P1	8,700/ 9,700	8,700/ 9,700	8,700/ 9,700
								(2) MS8-HI-09P1 (1) MS8-HI-12P1	8,000/ 9,000	8,000/ 9,000	10,000/ 11,000
								(2) MS8-HI-09P1 (1) MS8-HI-18P1	7,000/ 6,000	7,000/ 6,000	12,000/ 17,000
								(1) MS8-HI-09P1 (2) MS8-HI-12P1	6,000/ 6,000	10,000/ 11,500	10,000/ 11,500
								(1) MS8-HI-09P1 (1) MS8-HI-12P1 (1) MS8-HI-18P1	6,800/ 7,200	7,200/ 8,000	13,000/ 14,000
								(1) MS8-HI-09P1 (2) MS8-HI-18P1	6,000/ 7,200	11,800/ 14,100	11,800/ 14,100
								(3) MS8-HI-12P1	8,700/ 9,700	8,700/ 9,700	8,700/ 9,700
								(2) MS8-HI-12P1 (1) MS8-HI-18P1	6,500/ 7,200	6,500/ 7,000	15,000/ 16,000
								(1) MS8-HI-12P1 (2) MS8-HI-18P1	9,200/ 11,000	12,300/ 14,700	12,300/ 14,700
								(3) MS8-HI-18P1	9,900/ 11,900	9,900/ 11,900	9,900/ 11,900

NOTES:

Ratings are AHRI certified to AHRI Standard 210/240;

- Cooling Ratings - 95°F outdoor air temperature and 80 °F db/67° F wb entering indoor coil air.
- High Temperature Heating Ratings - 47° F db/43° F wb outdoor air temperature and 70 °F db entering indoor coil air.
- Low Temperature Heating Ratings - 17 °F db/15° F wb outdoor air temperature and 70 °F db entering indoor coil air.

To convert HSPF from Region IV to Region V - Divide by 1.15.

SYSTEM MATCHES

NOTES:

Per AHRI, the certified ratings for multi-zone mini-split systems are valid for all combinations of indoor units with the specific outdoor unit listed below and in the AHRI Directory of Certified Equipment. Please visit http://www.ahridirectory.org for further details.

Any system that is a combination of ALL NON-DUCTED indoor units (MS8-HI models) meets the rating requirement listed below.

AHRI Standard 210/240 Ratings								Indoor Unit Combinations				
Outdoor Model	Cooling Capacity	SEER	EER	Heat Capacity		HSPF Region IV	AHRI Ref. No.	Indoor Model	Cooling / Heating (Btuh)			
				High	Low				Zone 1	Zone 2	Zone 3	Zone 4
MS8-ZO-36P4	34,000	16.00	7.95	35,800	22,000	8.20	6484324	(4) MS8-HI-09P1	8,400/ 10,000	8,400/ 10,000	8,400/ 10,000	8,400/ 10,000
								(3) MS8-HI-09P1 (1) MS8-HI-12P1	7,500/ 9,000	7,500/ 9,000	7,500/ 9,000	10,900/ 13,100
								(2) MS8-HI-09P1 (1) MS8-HI-12P1 (1) MS8-HI-18P1	6,300/ 7,600	6,300/ 7,600	8,900 10,600	12,300/ 14,700
								(3) MS8-HI-09P1 (1) MS8-HI-18P1	6,800/ 8,200	6,800/ 8,200	6,800/ 8,200	12,300/ 14,700
								(2) MS8-HI-09P1 (2) MS8-HI-12P1	6,800/ 8,200	6,800/ 8,200	9,900/ 11,900	9,900/ 11,900
								(1) MS8-HI-09P1 (3) MS8-HI-12P1	7,800/ 9,400	8,500/ 10,200	8,500/ 10,200	8,500/ 10,200
								(1) MS8-HI-09P1 (2) MS8-HI-12P1 (1) MS8-HI-18P1	6,100/ 7,400	7,500/ 9,000	7,500/ 9,000	12,300/ 14,700
								(2) MS8-HI-09P1 (2) MS8-HI-18P1	5,500/ 6,600	5,500/ 6,600	11,300/ 13,500	11,300/ 13,500
								(4) MS8-HI-12P1	8,400/ 10,000	8,400/ 10,000	8,400/ 10,000	8,400/ 10,000

NOTES:

Ratings are AHRI certified to AHRI Standard 210/240;

- Cooling Ratings - 95°F outdoor air temperature and 80 °F db/67° F wb entering indoor coil air.
- High Temperature Heating Ratings - 47° F db/43° F wb outdoor air temperature and 70 °F db entering indoor coil air.
- Low Temperature Heating Ratings - 17 °F db/15° F wb outdoor air temperature and 70 °F db entering indoor coil air.

To convert HSPF from Region IV to Region V - Divide by 1.15.

RATINGS

NOTE - The ratings for multi-zone mini-split systems are valid for all combinations of indoor units with the specific outdoor unit listed.
Please visit http://www.ahridirectory.org for further details.
Any system that is a combination of ALL NON-DUCTED indoor units (MS8-HI models) meets the ratings listed below. See System Matches tables for valid combinations.

MS8-ZO-36P4 - COOLING CAPACITY - 208/230V-1PH

Outdoor Temperature °F (DB)	Indoor Entering Air Temperature					
	62°F		67°F		72°F	
	Total	Sensible	Total	Sensible	Total	Sensible
25°F	41,830	31,059	45,213	32,734	48,331	34,798
35°F	40,878	31,022	43,534	31,780	45,648	33,004
45°F	38,859	29,843	41,555	30,834	44,523	32,279
55°F	37,410	28,955	39,892	29,919	42,765	31,219
65°F	36,135	28,077	39,760	30,178	42,160	30,819
75°F	34,714	27,146	37,400	28,761	40,225	29,686
85°F	33,320	26,456	35,700	27,560	38,760	28,954
95°F	31,620	25,264	34,000	27,166	37,196	27,934
105°F	29,920	24,295	32,225	25,716	35,020	26,895
115°F	28,220	23,253	29,920	24,235	31,960	25,025

MS8-ZO-36P4 - HEATING CAPACITY - 208/230V-1PH

Outdoor Temperature °F (DB)	Indoor Entering Air Temperature					
	65°F		70°F		75°F	
	Total	Sensible	Total	Sensible	Total	Sensible
5°F	26,628	26,628	25,131	25,131	24,515	24,515
15°F	28,463	28,463	25,967	25,967	25,811	25,811
25°F	30,200	30,200	28,664	28,664	27,033	27,033
35°F	31,886	31,886	29,513	29,513	28,275	28,275
45°F	33,552	33,552	32,414	32,414	30,450	30,450
55°F	33,597	33,597	32,414	32,414	31,198	31,198
65°F	33,438	33,438	32,949	32,949	31,934	31,934

SOUND DATA - INDOOR

Indoor Unit Model No.	Sound Rating Number (dBA)							
	Low		Medium		High		Maximum	
	Pressure	Power	Pressure	Power	Pressure	Power	Pressure	Power
MS8-HI-09P1	32	42	35	45	38	48	42	52
MS8-HI-12P1	33	43	36	46	39	49	42	52
MS8-HI-18P1	35	45	40	50	44	54	49	59

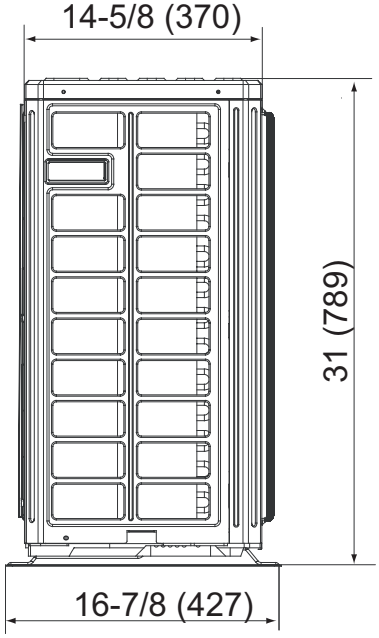
SOUND DATA - OUTDOOR

Outdoor Unit Model No.	Sound Rating Number (dBA)	
	Pressure	Power
MS8-ZO-36P4	59	69

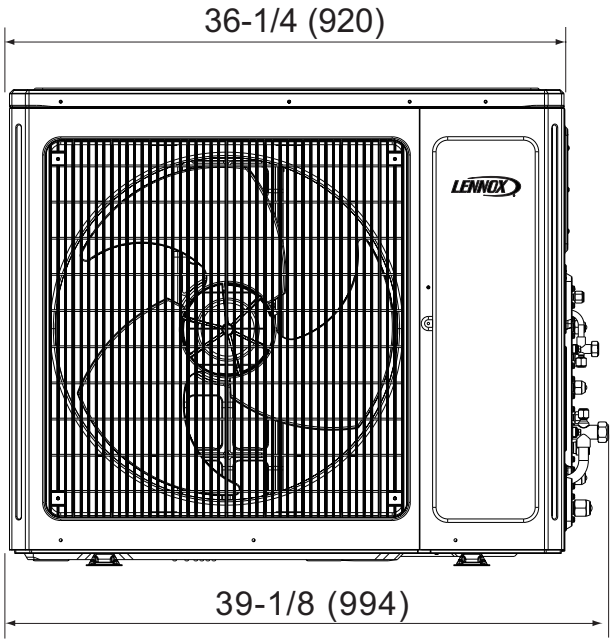
INDOOR UNIT AIR THROW DATA

Indoor Unit	Effective Throw - ft.		
	MS8-HI-09P1	MS8-HI-12P1	MS8-HI-18P1
Low Speed	18	19	25
Medium Speed	20	21	30
High Speed	23	25	32
Maximum Speed	N/A	N/A	35

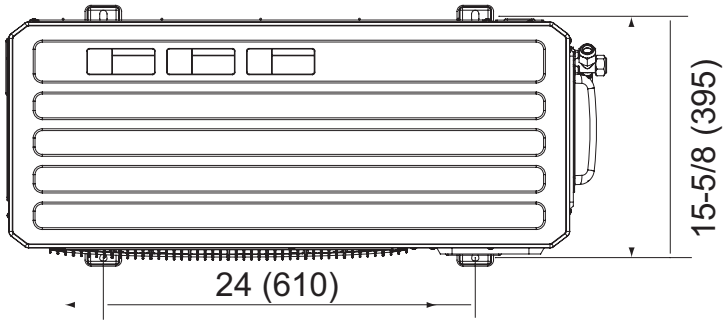
DIMENSIONS - OUTDOOR UNITS - INCHES (MM)



Side View

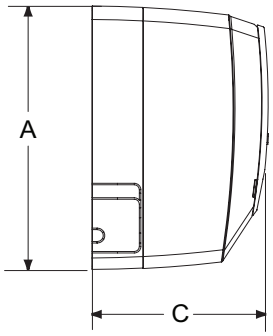


Front View

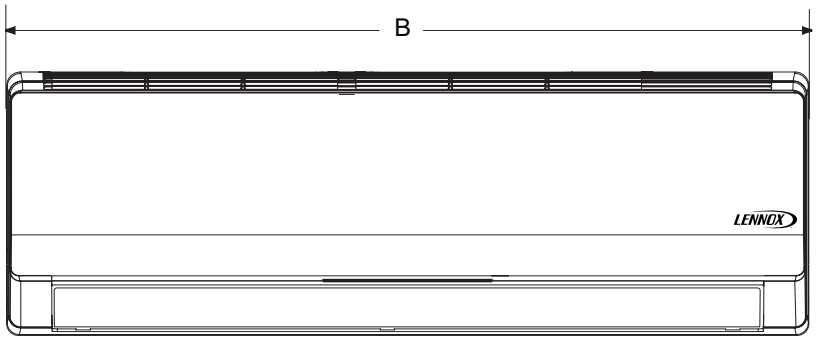


Bottom View

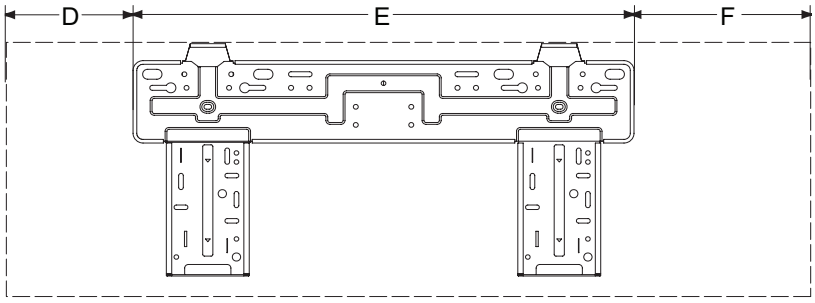
DIMENSIONS - INDOOR UNITS - INCHES (MM)



Side View



Front View



Typical Wall Mounting Plate Detail

Model No.	A		B		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MS8-HI-09P1	10-7/8	275	33-3/8	848	7	180	5-1/8	130	21-3/8	542	6-7/8	175
MS8-HI-12P1	10-7/8	275	33-3/8	848	7	180	5-1/8	130	21-3/8	542	6-7/8	175
MS8-HI-18P1	11-3/4	298	37	940	8	203	2	51	27	686	8	203

INSTALLATION CLEARANCES - INCHES (MM)

OUTDOOR UNITS	**in.**	**mm**
Left Side	20	508
Right Side	20	508
Front	79	2006
Rear	20	500
Top	40	1016
INDOOR UNITS	**in.**	**mm**
Left Side	6	152
Right Side	6	152
Top	6	152
Bottom	72	1829

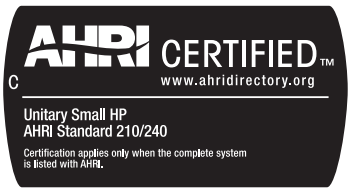
NOTES:

If outdoor unit is mounted on a flat rooftop allow a minimum of 4 in. (102 mm) above the roof surface.

Locate the unit above a load bearing wall or area of the roof that can adequately support the unit. Consult local codes for rooftop applications.

REVISIONS

Sections	Description of Change
Features	Approvals - Meets 2014 Florida Building Code Wind Design Criteria.



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