



MINI-SPLIT SYSTEMS

MS8Z

Lennox® 8 Series Multi-Zone Heat Pumps - R-410A

PRODUCT SPECIFICATIONS

Bulletin No. 210633
September 2016
Supersedes January 2014



SEER up to 16.00

MODEL NUMBER IDENTIFICATION

OUTDOOR UNITS

MS 8 - ZO - 18 P 2 A

Series Type
MS = Mini-Split

Major Revision

Unit Type
ZO = Multi-Zone Heat Pump Outdoor Unit

Minor Revision

Number of Zones
2 = Two Zones
3 = Three Zones
4 = Four Zones

Voltage
P = 208/230V-1phase-60hz

Nominal Cooling Capacity
18 = 1.5 tons
24 = 2 tons
30 = 2.5 tons

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

Minor Revision

Number of Zones
1 = One Zone

Voltage
P = 208/230V-1phase-60hz

Nominal Cooling Capacity
09 = 0.75 tons
12 = 1 tons
18 = 1.5 tons

FEATURES - OUTDOOR UNITS

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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 56 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.

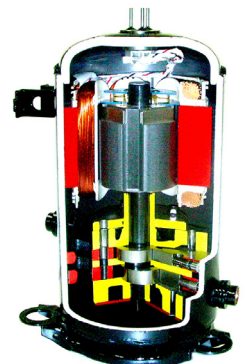
Balanced for reduced vibration and quiet operation.

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:

- 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.

When the outdoor coil temperature drops to 124°F, 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 194°F, 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, the 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)

FEATURES - INDOOR UNITS

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.

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.

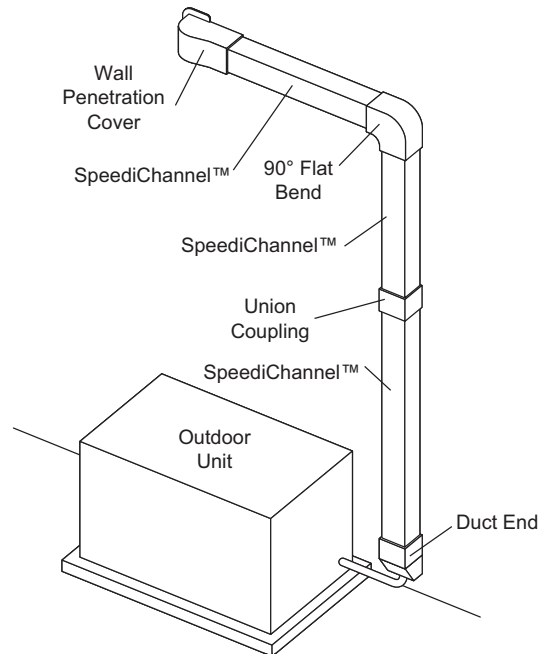
ETL listed.

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) Speediclips™, (10) 11 in. Cable Ties, and (1) SpeediChannel Instruction Booklet.

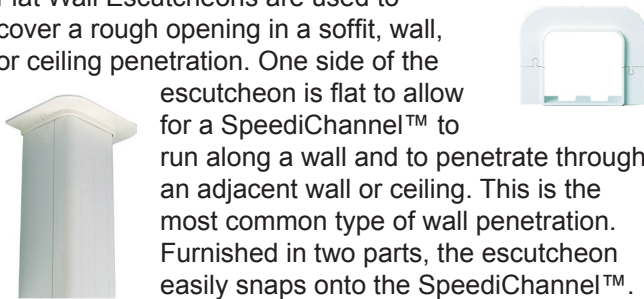
Duct End

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™.

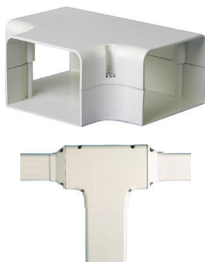


Flex Joint

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.



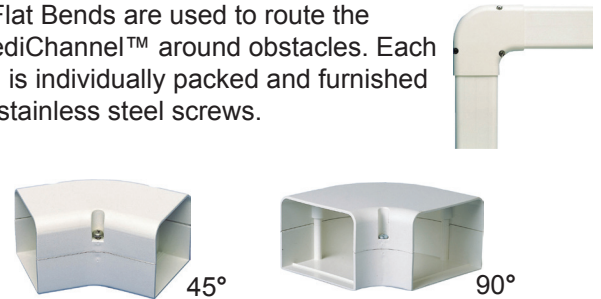
Wall Penetration Cover

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.



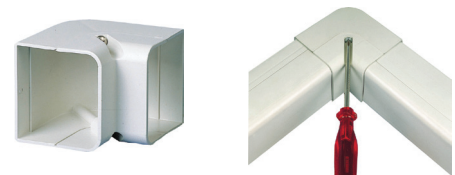
45° and 90° Flat Bend Elbows

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



90° Inside Elbow

90° 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 -4°F to 140°F. Mount blocks fit all mini-split outdoor units with a sliding rail feature.



SPECIFICATIONS - OUTDOOR UNIT

		Model No.	MS8-ZO-18P2	MS8-ZO-24P3	MS8-ZO-30P4
	Number of Zones		2	2 or 3	2, 3 or 4
Ambient Temperature Operating Range - °F	Cooling		23 - 118	23 - 118	23 - 118
	Heating		5 - 80	5 - 80	5 - 80
Connections No. (in.)	Liquid line o.d. - flare		(2) 1/4	(3) 1/4	(4) 1/4
	Suction line o.d. - flare		(2) 3/8	(3) 3/8	(4) 3/8
Refrigerant (R-410A) furnished			2 lbs. 9 oz.	4 lbs. 8 oz.	4 lbs. 8 oz.
Outdoor Coil	Net face area - sq. ft.		4.5	6.3	6.3
	Tube diameter - in.		5/16	3/8	3/8
	Number of rows		2	2	2
	Fins per inch		18	18	18
Outdoor Fan Motor (cfm)	Diameter - in.		17-1/2	20-1/2	20-1/2
	No. of blades		3	3	3
	High		2600	3300	3300
	Standard		2300	2900	2900
	Low		1600	2400	2400
Outdoor Fan Motor Rpm	High		830	690	690
	Standard		670	600	600
	Low		500	500	500
Shipping Data - lbs.			106	145	148

ELECTRICAL DATA

		208/230V	208/230V	208/230V
Line voltage data - 60 hz - 1ph		208/230V	208/230V	208/230V
¹ Max. overcurrent protection (amps)		20	30	45
² Minimum circuit ampacity		13	20	26
Compressor	Locked rotor amps	27	45	45
	Rated load amps	10	13	13
³ Compressor Power Input (W)	Cooling	High	2800	4500
		Standard	1650	3050
		Low	680	650
	Heating	High	2800	3950
		Standard	1640	2800
		Low	680	980
Outdoor Fan Motor	Rated load amps	0.54	0.59	0.59
	Output (W)	60	60	60

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

		208/230V	208/230V	208/230V
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	24	30
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		N/A	•	•	
	¹ 1/4 in. x 1/2 in. x 50 ft. X0259		N/A	•	•	
Male Flare Adaptor	5/16 in. quick connect x 1/4 in. MF Y0576		•	•	•	
Wall Brackets	30 inch Y5020		•	•		N/A
	36 inch Y5021		N/A	N/A	•	
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 units available in these sizes	
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-24P3 and MS8-ZO-30P4 outdoor units 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	Indoor Model	Line Set Required
MS8-ZO-18P2	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	(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-ZO-24P3	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	(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-09P1	(1) 1/4 in. x 3/8 in.
	(1) MS8-HI-18P1	¹ (1) 1/4 in. x 1/2 in.
	(2) MS8-HI-12P1	(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.
	(2) MS8-HI-18P1	¹ (2) 1/4 in. x 1/2 in.
	(3) MS8-HI-09P1	(3) 1/4 in. x 3/8 in.
	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
	(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.
	(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) MS8-HI-12P1	(3) 1/4 in. x 3/8 in.	

¹ Two 3/8 to 1/2 in. refrigerant line adaptors are furnished with MS8-ZO-24P3 and MS8-ZO-30P4 outdoor units 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.

SYSTEM MATCHES - LINE SET USAGE

Outdoor Model	Indoor Model	Line Set Required
¹ MS8-ZO-30P4	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	(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-09P1	(1) 1/4 in. x 3/8 in.
	(1) MS8-HI-18P1	¹ (1) 1/4 in. x 1/2 in.
	(2) MS8-HI-12P1	(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.
	(2) MS8-HI-18P1	¹ (2) 1/4 in. x 1/2 in.
	(3) MS8-HI-09P1	(3) 1/4 in. x 3/8 in.
	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
	(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.
	(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-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) MS8-HI-12P1	(3) 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) MS8-HI-09P1	(4) 1/4 in. x 3/8 in.
	(3) MS8-HI-09P1	(3) 1/4 in. x 3/8 in.
	(1) MS8-HI-12P1	(1) 1/4 in. x 3/8 in.
	(2) MS8-HI-09P1	(2) 1/4 in. x 3/8 in.
	(2) MS8-HI-12P1	(2) 1/4 in. x 3/8 in.

¹ Two 3/8 to 1/2 in. refrigerant line adaptors are furnished with MS8-ZO-24P3 and MS8-ZO-30P4 outdoor units 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.

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.

Outdoor Model	AHRI Standard 210/240 Ratings						Indoor Unit Combinations					
	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-18P2	18,000	16.00	10.20	19,000	9,600	8.20	5454432	¹ (1) MS8-HI-09P1	9,000/ 9,500	---	---	---
								¹ (1) MS8-HI-12P1	12,000/ 13,000	---	---	---
								(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	---	---
MS8-ZO-24P3	26,000	16.00	8.20	29,000	17,000	8.20	5454433	(2) MS8-HI-09P1	9,000/ 9,500	9,000/ 9,500	---	---
								(1) MS8-HI-09P1 (1) MS8-HI-12P1	9,000/ 9,000	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	12,750/ 14,250	12,750/ 14,250	---	---
								(3) MS8-HI-09P1	8,665/ 9,665	8,665/ 9,665	8,665/ 9,665	---
								(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	---
(3) MS8-HI-12P1	8,665/ 9,665	8,665/ 9,665	8,665/ 9,665	---								

¹ One MS8-ZO-18P2 Outdoor Unit may be matched with one MS8-HI-09P1 or one MS8-HI-12P1 Indoor Unit for single zone applications. A second indoor unit can be added at a later date for multi-zone applications.

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-30P4	29,000	16.00	7.30	30,400	16,500	8.20	5454434	(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	12,750/ 14,250	12,750/ 14,250	---	---
								(3) MS8-HI-09P1	8,665/ 9,665	8,665/ 9,665	8,665/ 9,665	---
								(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	---
								(3) MS8-HI-12P1	8,665/ 9,665	8,665/ 9,665	8,665/ 9,665	---
								(2) MS8-HI-12P1 (1) MS8-HI-18P1	6,500/ 7,200	6,500/ 7,000	15,000/ 16,000	---
								(4) MS8-HI-09P1	7,250/ 7,625	7,250/ 7,625	7,250/ 7,625	7,250/ 7,625
								(3) MS8-HI-09P1 (1) MS8-HI-12P1	7,000/ 7,100	7,000/ 7,100	7,000/ 7,100	8,000/ 9,200
								(2) MS8-HI-09P1 (2) MS8-HI-12P1	6,800/ 6,500	6,800/ 6,500	7,700/ 9,000	7,700/ 9,000

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-18P2 - 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	22,145	16,443	23,936	17,330	25,587	18,422
35°F	21,641	16,423	23,047	16,825	24,167	17,473
45°F	20,572	15,799	22,000	16,324	23,571	17,089
55°F	19,805	15,329	21,119	15,839	22,640	16,528
65°F	19,130	14,864	21,049	15,977	22,320	16,316
75°F	18,378	14,371	19,800	15,226	21,296	15,716
85°F	17,640	14,006	18,900	14,591	20,520	15,329
95°F	16,740	13,375	18,000	14,382	19,692	14,789
105°F	15,840	12,862	17,060	13,614	18,540	14,239
115°F	14,939	12,309	15,839	12,829	16,919	13,248

MS8-ZO-18P2 - 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	15,608	15,608	14,731	14,731	14,370	14,370
15°F	16,684	16,684	15,221	15,221	15,130	15,130
25°F	17,702	17,702	16,802	16,802	15,846	15,846
35°F	18,691	18,691	17,300	17,300	16,574	16,574
45°F	19,667	19,667	19,000	19,000	17,849	17,849
55°F	19,693	19,693	19,124	19,124	18,287	18,287
65°F	19,600	19,600	19,314	19,314	18,719	18,719

MS8-ZO-24P3 - 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	31,988	23,751	34,575	25,032	36,959	26,610
35°F	31,260	23,723	33,291	24,302	34,907	25,238
45°F	29,716	22,821	31,777	23,579	34,047	24,684
55°F	28,608	22,142	30,506	22,879	32,703	23,873
65°F	27,633	21,471	30,405	23,077	32,240	23,567
75°F	26,546	20,759	28,600	21,994	30,760	22,701
85°F	25,480	20,231	27,300	21,075	29,640	22,141
95°F	24,180	19,320	26,000	20,774	28,444	21,361
105°F	22,880	18,579	24,643	19,665	26,780	20,567
115°F	21,578	17,780	22,878	18,531	24,438	19,135

MS8-ZO-24P3 - 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	23,823	23,823	22,484	22,484	21,933	21,933
15°F	25,465	25,465	23,232	23,232	23,092	23,092
25°F	27,019	27,019	25,645	25,645	24,186	24,186
35°F	28,528	28,528	26,405	26,405	25,297	25,297
45°F	30,018	30,018	29,000	29,000	27,243	27,243
55°F	30,058	30,058	29,189	29,189	27,912	27,912
65°F	29,916	29,916	29,479	29,479	28,571	28,571

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-30P4 - 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	35,679	26,492	38,564	27,920	41,224	29,681
35°F	34,867	26,460	37,132	27,106	38,935	28,150
45°F	33,144	25,454	35,444	26,300	37,976	27,532
55°F	31,909	24,697	34,026	25,519	36,476	26,628
65°F	30,821	23,948	33,913	25,740	35,960	26,287
75°F	29,609	23,154	31,900	24,531	34,310	25,320
85°F	28,420	22,565	30,450	23,507	33,060	24,696
95°F	26,970	21,549	29,000	23,171	31,726	23,826
105°F	25,520	20,722	27,486	21,934	29,870	22,940
115°F	24,068	19,832	25,518	20,669	27,258	21,343

MS8-ZO-30P4 - 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	24,974	24,974	23,570	23,570	22,992	22,992
15°F	26,694	26,694	24,354	24,354	24,207	24,207
25°F	28,324	28,324	26,883	26,883	25,353	25,353
35°F	29,905	29,905	27,679	27,679	26,518	26,518
45°F	31,467	31,467	30,400	30,400	28,558	28,558
55°F	31,509	31,509	30,598	30,598	29,260	29,260
65°F	31,360	31,360	30,902	30,902	29,950	29,950

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

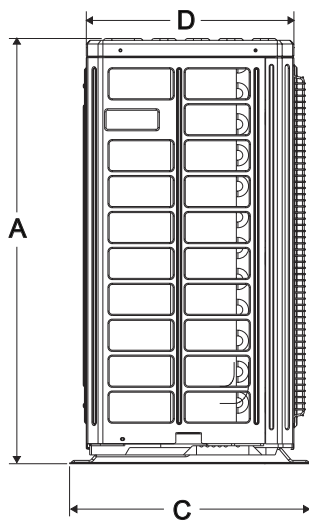
Outdoor Unit Model No.	Sound Rating Number (dBA)	
	Pressure	Power
MS8-ZO-18P2	56	66
MS8-ZO-24P3	59	69
MS8-ZO-30P4	59	69

INDOOR UNIT AIR THROW DATA

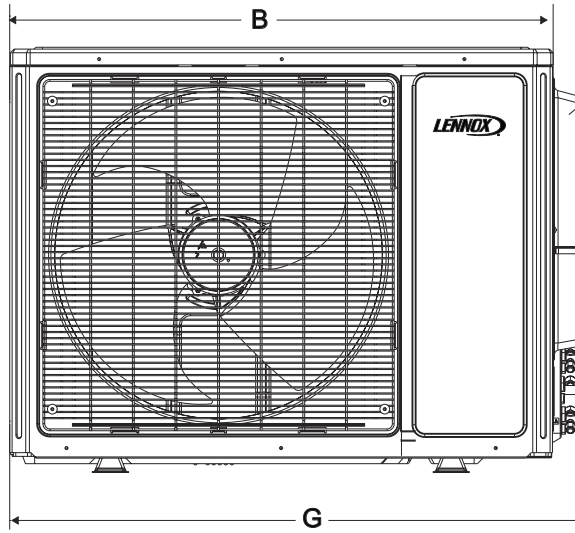
Indoor Unit	Effective Throw - ft.		
	MS8-HI-09P1	MS8-HI-12P1	MS8-HI-18P1
Low Speed	18	19	25
Medium Speed	20	21	30
High Speed	23	25	32
Maximum Speed	N/A	N/A	35

DIMENSIONS - OUTDOOR UNITS - INCHES (MM)

NOTE - MS8-ZO-30 Shown

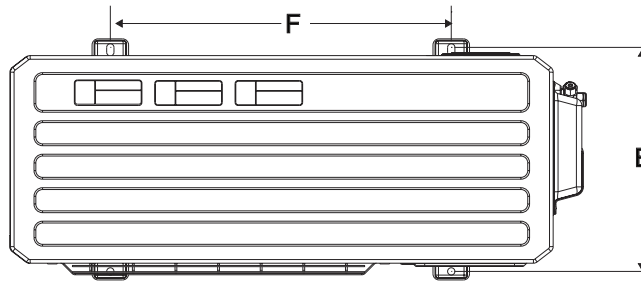


Side View



Electrical Connections Cover

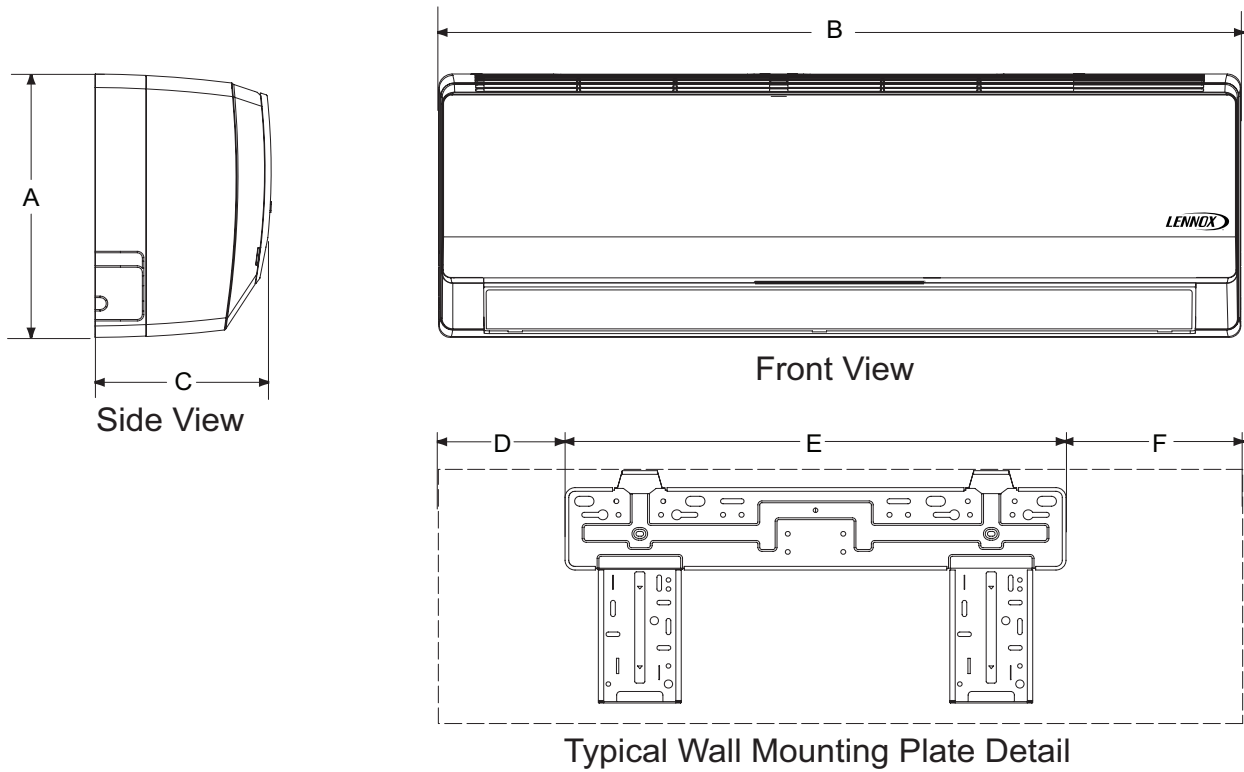
Front View



Bottom View

Model No.	A		B		C		D		E		F		G	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MS8-ZO-18P2	23-12	596	32	815	14-7/8	378	12-1/2	316	13-1/2	343	21-5/8	550	35-3/8	899
MS8-ZO-24P3	27-1/2	700	35-1/8	892	15-5/8	396	13-1/2	341	14-1/2	368	22	560	37-1/4	946
MS8-ZO-30P4														

DIMENSIONS - INDOOR UNITS - INCHES (MM)



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	12	305
Right Side	12	305
Front	48	1219
Rear	12	305
Top	24	510
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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NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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