INSTALLATION INSTRUCTIONS

MLB and MPC MULTI-ZONE OUTDOOR UNITS

MULTI-ZONE MINI-SPLIT OUTDOOR UNITS (208/230V)
507549-08 10/2021
Supersedes 507549-07

THIS MANUAL MUST BE LEFT WITH THE OWNER FOR FUTURE REFERENCE

Table of Contents

⚠WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.

Installation and service must be performed by a licensed professional HVAC installer (or equivalent) or a service agency.

⚠WARNING

The clean Air Act of 1990 bans the intentional venting of refrigerant (CFCs, HCFCs, and HFCs) as of July, 1992. Approved methods of recovery, recycling or reclaiming must be followed. Fines and/or incarceration may be levied for non-compliance.

⚠CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

General

Refer to the Product Specifications bulletin (EHB) for more product information.

These instructions are intended as a general guide and do not supersede local or national codes in any way. Authorities having jurisdiction should be consulted before installation.

The MWMC, M22A, M33C, MMDB, MCFB and MFMA indoor units are matched with a two to five port multi-zone outdoor heat pump unit to create a mini-split system that uses HFC-410A refrigerant.

NOTE: *Outdoor units can only be installed in an unenclosed outdoor environment.*

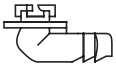
Included Parts

Check the components for shipping damage. If you find any damage, immediately contact the last carrier.

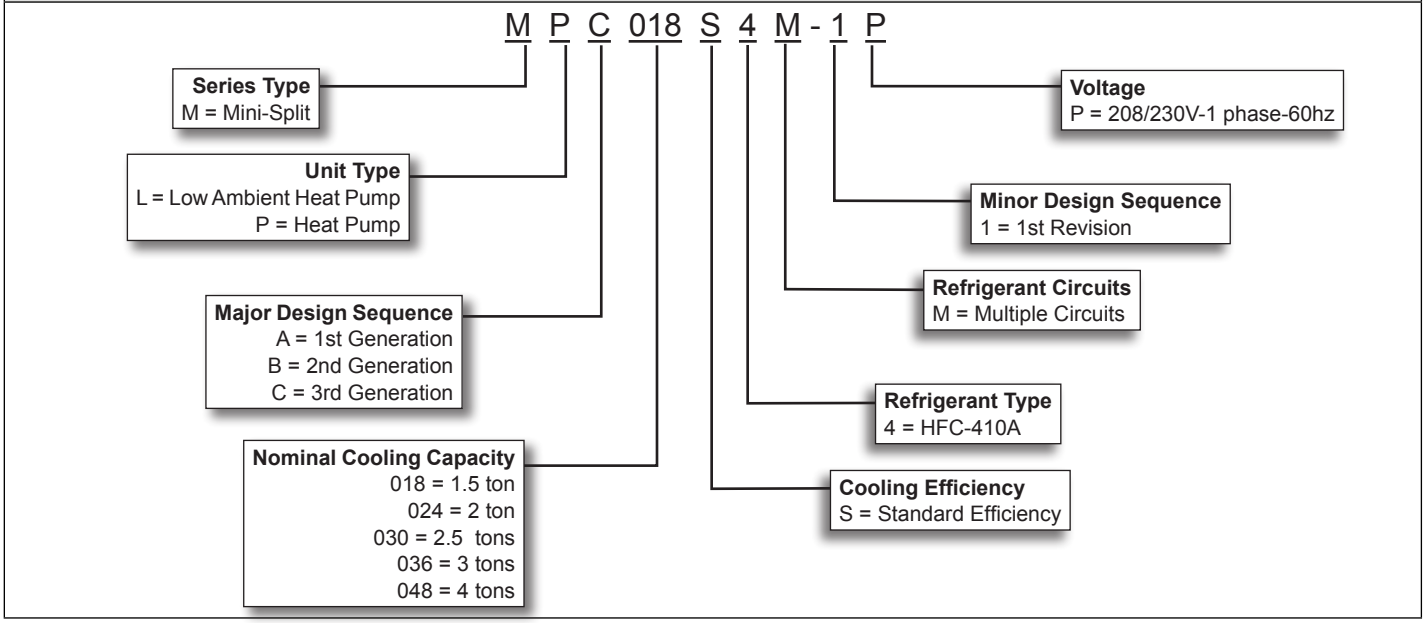
Package contains the following:

1 - Assembled Indoor Unit (assembled indoor unit will include accessories specific to the unit. See each indoor unit's section within this manual for accessories included with that unit).

1 - Assembled Outdoor Unit and the following items:

Parts	Figure	Qty	Parts	Figure	Qty	Parts	Figure	Qty
Drain connector		1	Installation Instruction		1 ea.	Seal Ring		1

Model Number Identification



Typical Multi-Zone System Components

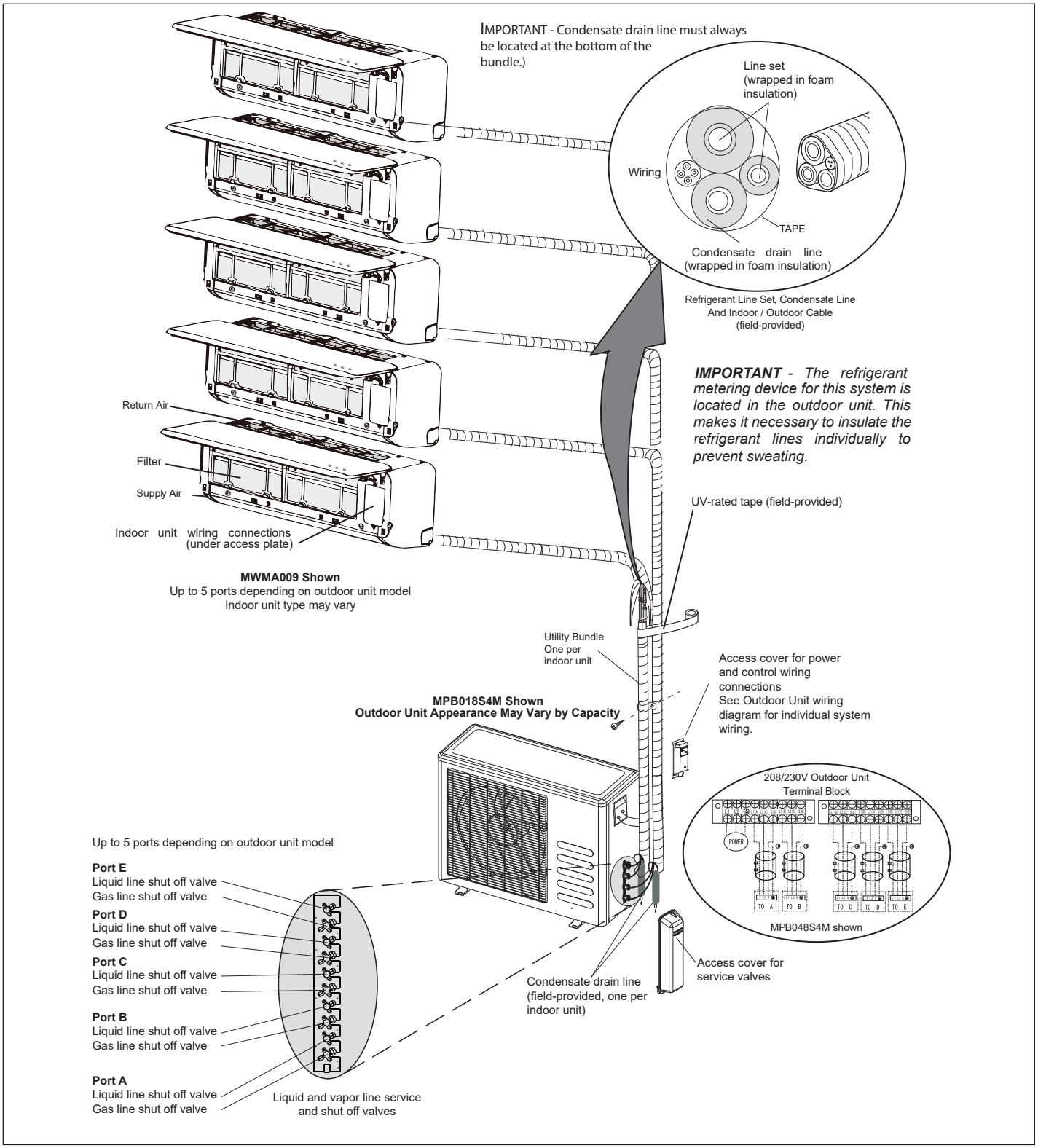
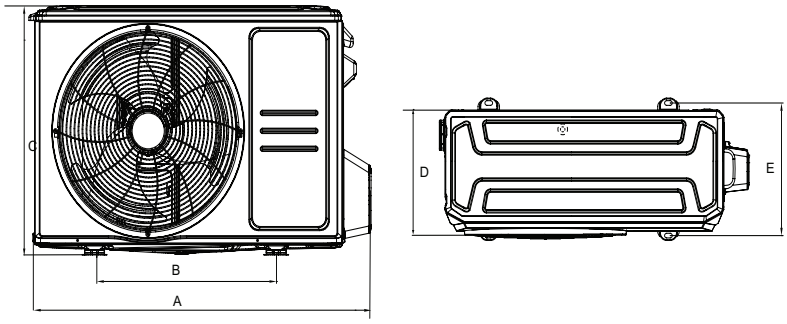


Figure 1. Typical System Shown
(Indoor Unit Appearance is Dependent on Model)

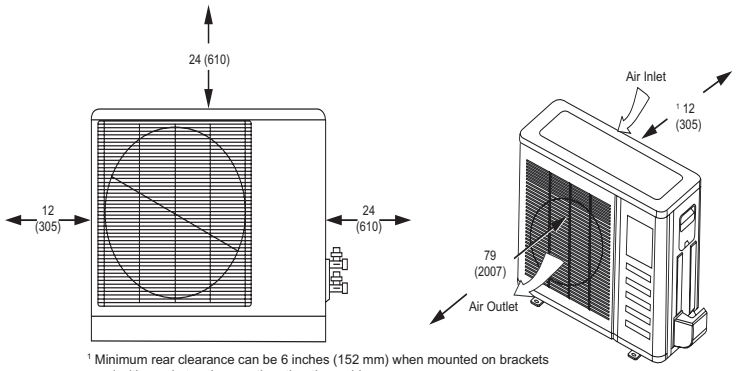
Outdoor Unit Dimensions



Model	Unit of Measurement	A	B	C	D	E
MPC018S4M-*P	inches	39	26-1/8	26-1/2	12-3/4	13-3/4
	mm	991	664	673	342	345
MPC024S4M-*P MPC030S4M-*P MPC036S4M-*P	inches	40-3/4	26-1/2	31-7/8	16-1/8	15-7/8
	mm	1035	673	810	410	403
MPC048S4M-*P	inches	41-3/4	25	52-1/2	16-3/8	17-5/8
	mm	1060	635	1334	416	448
MLB018S4M-*P MLB030S4M-*P	inches	40-5/8	26-1/2	31-7/8	15-1/8	15-7/8
	mm	1035	673	810	410	403
MLB036S4M-*P MLB048S4M-*P	inches	41-3/4	25	52-1/2	16-3/8	17-5/8
	mm	1060	635	1334	416	448

Figure 2. Outdoor Unit Dimensions - Inches (mm)

Outdoor Unit Clearances

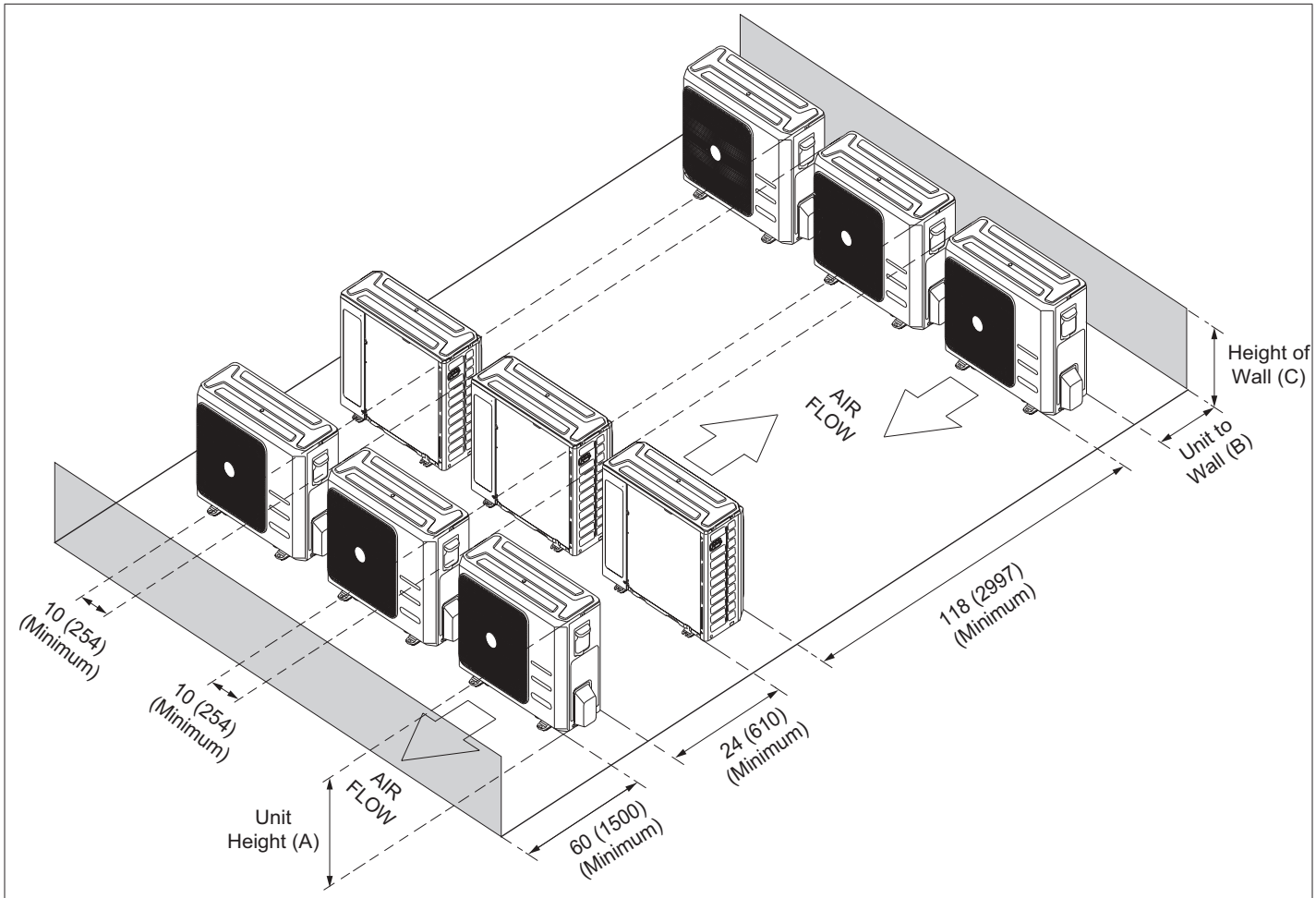


[1] Minimum rear clearance can be 6 inches (152 mm) when mounted on brackets and with no obstructions on the other three sides.

IMPORTANT

The construction of a canopy or shade is recommend when the outdoor unit is placed in direct sunlight all day with temperatures exceeding 100°F (38°C). This is necessary because of an ambient limit control set to 122°F (50°C) to protect the electronics. If the outdoor unit is placed in direct sunlight it is possible that the limit may activate and shut down the unit. A canopy is recommended

Figure 3. Outdoor Unit Clearances - Inches (mm)



CLEARANCE NOTES FOR MULTIPLE UNITS:

If the height of the wall (C) is less than or equal to the height of the smallest unit (A), the distance from the unit to the wall (B) must be a minimum of 10 inches (254 mm).

Figure 4. Multiple Outdoor Unit Clearances - Inches (mm)

MLB and MPC Multi-Zone System Combinations

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB/ MPC018S4M	2	6K	6K	- - -	- - -	- - -	6,000	6,000	- - -	- - -	- - -	6,700	6,700	- - -	- - -	- - -
		6K	9K	- - -	- - -	- - -	6,000	9,000	- - -	- - -	- - -	6,600	9,900	- - -	- - -	- - -
		6K	12K	- - -	- - -	- - -	6,000	12,000	- - -	- - -	- - -	6,300	12,500	- - -	- - -	- - -
		9K	9K	- - -	- - -	- - -	9,000	9,000	- - -	- - -	- - -	9,500	9,500	- - -	- - -	- - -
		9K	12K	- - -	- - -	- - -	8,000	11,000	- - -	- - -	- - -	8,600	11,500	- - -	- - -	- - -
		12K	12K	- - -	- - -	- - -	10,000	10,000	- - -	- - -	- - -	10,100	10,100	- - -	- - -	- - -
MPC024S4M	2	6K	12K	- - -	- - -	- - -	6,000	12,000	- - -	- - -	- - -	6,500	12,900	- - -	- - -	- - -
		6K	18K	- - -	- - -	- - -	5,000	17,000	- - -	- - -	- - -	6,300	18,900	- - -	- - -	- - -
		9K	9K	- - -	- - -	- - -	9,000	9,000	- - -	- - -	- - -	9,700	9,700	- - -	- - -	- - -
		9K	12K	- - -	- - -	- - -	8,000	11,000	- - -	- - -	- - -	9,700	12,900	- - -	- - -	- - -
		9K	18K	- - -	- - -	- - -	8,000	16,000	- - -	- - -	- - -	9,200	18,300	- - -	- - -	- - -
		12K	12K	- - -	- - -	- - -	11,000	11,000	- - -	- - -	- - -	12,600	12,600	- - -	- - -	- - -
		12K	18K	- - -	- - -	- - -	10,000	15,000	- - -	- - -	- - -	11,600	17,400	- - -	- - -	- - -
		18K	18K	- - -	- - -	- - -	14,000	14,000	- - -	- - -	- - -	14,800	14,800	- - -	- - -	- - -
	3	6K	6K	6K	- - -	- - -	7,000	7,000	7,000	- - -	- - -	8,500	8,500	8,500	- - -	- - -
		6K	6K	9K	- - -	- - -	7,000	7,000	10,000	- - -	- - -	7,700	7,700	11,500	- - -	- - -
		6K	6K	12K	- - -	- - -	6,000	6,000	13,000	- - -	- - -	7,000	7,000	13,900	- - -	- - -
		6K	6K	18K	- - -	- - -	6,000	6,000	17,000	- - -	- - -	5,900	5,900	17,500	- - -	- - -
		6K	9K	9K	- - -	- - -	6,000	9,000	9,000	- - -	- - -	6,000	9500	9500	- - -	- - -
		6K	9K	12K	- - -	- - -	6,000	9,000	12,000	- - -	- - -	6,400	9,500	12,700	- - -	- - -
		6K	9K	18K	- - -	- - -	5,000	8,000	16,000	- - -	- - -	5,400	8,100	16,100	- - -	- - -
		6K	12K	12K	- - -	- - -	6,000	11,000	11,000	- - -	- - -	5,900	11,700	11,700	- - -	- - -
		6K	12K	18K	- - -	- - -	5,000	10,000	15,000	- - -	- - -	5,000	10,000	15,000	- - -	- - -
		9K	9K	9K	- - -	- - -	9,000	9,000	9,000	- - -	- - -	9,500	9,500	9,500	- - -	- - -
		9K	9K	12K	- - -	- - -	9,000	9,000	11,000	- - -	- - -	8,800	8,800	11,700	- - -	- - -
		9K	9K	18K	- - -	- - -	7,000	7,000	15,000	- - -	- - -	7,500	7,500	15,000	- - -	- - -
		9K	12K	12K	- - -	- - -	8,000	11,000	11,000	- - -	- - -	8,100	10,800	10,800	- - -	- - -
		12K	12K	12K	- - -	- - -	10,000	10,000	10,000	- - -	- - -	10,000	10,000	10,000	- - -	- - -
MLB / MPC030S4M	2	6K	12K	- - -	- - -	- - -	6,000	12,000	- - -	- - -	- - -	6,500	12,900	- - -	- - -	- - -
		6K	18K	- - -	- - -	- - -	5,000	17,000	- - -	- - -	- - -	6,300	18,900	- - -	- - -	- - -
		9K	9K	- - -	- - -	- - -	9,000	9,000	- - -	- - -	- - -	9,700	9,700	- - -	- - -	- - -
		9K	12K	- - -	- - -	- - -	8,000	11,000	- - -	- - -	- - -	9,700	12,900	- - -	- - -	- - -
		9K	18K	- - -	- - -	- - -	8,000	16,000	- - -	- - -	- - -	9,200	18,300	- - -	- - -	- - -
		12K	12K	- - -	- - -	- - -	11,000	11,000	- - -	- - -	- - -	12,600	12,600	- - -	- - -	- - -
		12K	18K	- - -	- - -	- - -	10,000	15,000	- - -	- - -	- - -	11,600	17,400	- - -	- - -	- - -
		18K	18K	- - -	- - -	- - -	14,000	14,000	- - -	- - -	- - -	14,800	14,800	- - -	- - -	- - -
	3	6K	6K	6K	- - -	- - -	7,000	7,000	7,000	- - -	- - -	8,500	8,500	8,500	- - -	- - -
		6K	6K	9K	- - -	- - -	7,000	7,000	10,000	- - -	- - -	7,700	7,700	11,500	- - -	- - -
		6K	6K	12K	- - -	- - -	6,000	6,000	13,000	- - -	- - -	7,000	7,000	13,900	- - -	- - -
		6K	6K	18K	- - -	- - -	6,000	6,000	17,000	- - -	- - -	5,900	5,900	17,500	- - -	- - -
		6K	9K	9K	- - -	- - -	6,000	10,000	10,000	- - -	- - -	7,000	10,500	10,500	- - -	- - -
		6K	9K	12K	- - -	- - -	6,000	9,000	12,000	- - -	- - -	6,400	9,500	12,700	- - -	- - -
		6K	9K	18K	- - -	- - -	5,000	8,000	16,000	- - -	- - -	5,400	8,100	16,100	- - -	- - -
		6K	12K	12K	- - -	- - -	6,000	11,000	11,000	- - -	- - -	5,900	11,700	11,700	- - -	- - -
		6K	12K	18K	- - -	- - -	5,000	10,000	15,000	- - -	- - -	5,000	10,000	15,000	- - -	- - -
		9K	9K	9K	- - -	- - -	9,000	9,000	9,000	- - -	- - -	9,500	9,500	9,500	- - -	- - -
		9K	9K	12K	- - -	- - -	9,000	9,000	11,000	- - -	- - -	8,800	8,800	11,700	- - -	- - -
		9K	9K	18K	- - -	- - -	7,000	7,000	15,000	- - -	- - -	7,500	7,500	15,000	- - -	- - -

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB/ MPC030S4M	3	9K	12K	12K	- - -	- - -	8,000	11,000	11,000	- - -	- - -	8,100	10,800	10,800	- - -	- - -
		12K	12K	12K	- - -	- - -	10,000	10,000	10,000	- - -	- - -	10,000	10,000	10,000	- - -	- - -
MLB / MPC036S4M	2	6K	18K	- - -	- - -	- - -	6,000	18,000	- - -	- - -	- - -	6,400	19,100	- - -	- - -	- - -
		6K	24K	- - -	- - -	- - -	6,000	22,000	- - -	- - -	- - -	6,100	24,200	- - -	- - -	- - -
		9K	18K	- - -	- - -	- - -	9,000	17,000	- - -	- - -	- - -	9,400	18,700	- - -	- - -	- - -
		9K	24K	- - -	- - -	- - -	8,000	21,000	- - -	- - -	- - -	8,800	23,300	- - -	- - -	- - -
		12K	12K	- - -	- - -	- - -	12,000	12,000	- - -	- - -	- - -	12,800	12,800	- - -	- - -	- - -
		12K	18K	- - -	- - -	- - -	11,000	17,000	- - -	- - -	- - -	12,100	18,200	- - -	- - -	- - -
		12K	24K	- - -	- - -	- - -	10,000	20,000	- - -	- - -	- - -	11,100	22,200	- - -	- - -	- - -
		18K	18K	- - -	- - -	- - -	15,000	15,000	- - -	- - -	- - -	16,600	16,600	- - -	- - -	- - -
		18K	24K	- - -	- - -	- - -	13,000	18,000	- - -	- - -	- - -	14,500	19,300	- - -	- - -	- - -
		24K	24K	- - -	- - -	- - -	15,000	15,000	- - -	- - -	- - -	15,700	15,700	- - -	- - -	- - -
	3	6K	6K	12K	- - -	- - -	6,500	6,500	12,900	- - -	- - -	6,800	6,800	13,600	- - -	- - -
		6K	6K	18K	- - -	- - -	6,000	6,000	18,000	- - -	- - -	6,300	6,300	18,900	- - -	- - -
		6K	6K	24K	- - -	- - -	5,500	5,500	22,000	- - -	- - -	5,800	5,800	23,200	- - -	- - -
		6K	9K	12K	- - -	- - -	6,200	9,300	12,500	- - -	- - -	6,600	9,800	13,100	- - -	- - -
		6K	9K	18K	- - -	- - -	5,700	8,600	17,200	- - -	- - -	6,100	9,100	18,100	- - -	- - -
		6K	9K	24K	- - -	- - -	5,300	7,900	21,100	- - -	- - -	5,600	8,400	22,200	- - -	- - -
		6K	12K	12K	- - -	- - -	6,000	12,000	12,000	- - -	- - -	6,300	12,600	12,600	- - -	- - -
		6K	12K	18K	- - -	- - -	5,500	11,000	16,500	- - -	- - -	5,800	11,600	17,400	- - -	- - -
		6K	12K	24K	- - -	- - -	5,000	10,000	20,100	- - -	- - -	5,300	10,600	21,200	- - -	- - -
		6K	18K	18K	- - -	- - -	5,000	15,100	15,100	- - -	- - -	5,300	15,900	15,900	- - -	- - -
		6K	18K	24K	- - -	- - -	4,500	13,600	18,100	- - -	- - -	4,800	14,400	19,200	- - -	- - -
		9K	9K	9K	- - -	- - -	9,300	9,300	9,300	- - -	- - -	9,800	9,800	9,800	- - -	- - -
		9K	9K	12K	- - -	- - -	9,000	9,000	12,000	- - -	- - -	9,500	9,500	12,600	- - -	- - -
		9K	9K	18K	- - -	- - -	8,300	8,300	16,500	- - -	- - -	8,700	8,700	17,400	- - -	- - -
		9K	9K	24K	- - -	- - -	7,500	7,500	20,100	- - -	- - -	8,000	8,000	21,200	- - -	- - -
		9K	12K	12K	- - -	- - -	8,600	11,500	11,500	- - -	- - -	9,100	12,100	12,100	- - -	- - -
		9K	12K	18K	- - -	- - -	7,900	10,500	15,800	- - -	- - -	8,400	11,100	16,700	- - -	- - -
		9K	12K	24K	- - -	- - -	7,200	9,600	19,100	- - -	- - -	7,600	10,100	20,200	- - -	- - -
		9K	18K	18K	- - -	- - -	7,200	14,300	14,300	- - -	- - -	7,600	15,200	15,200	- - -	- - -
		12K	12K	12K	- - -	- - -	11,000	11,000	11,000	- - -	- - -	11,600	11,600	11,600	- - -	- - -
		12K	12K	18K	- - -	- - -	10,000	10,000	15,100	- - -	- - -	10,600	10,600	15,900	- - -	- - -
		12K	12K	24K	- - -	- - -	9,100	9,100	18,100	- - -	- - -	9,600	9,600	19,200	- - -	- - -
		12K	18K	18K	- - -	- - -	9,100	13,600	13,600	- - -	- - -	9,600	14,400	14,400	- - -	- - -
	4	6K	6K	6K	6K	- - -	7,200	7,200	7,200	7,200	- - -	7,700	7,700	7,700	7,700	- - -
		6K	6K	6K	9K	- - -	6,900	6,900	6,900	10,400	- - -	7,400	7,400	7,400	11,000	- - -
		6K	6K	6K	12K	- - -	6,600	6,600	6,600	13,200	- - -	7,000	7,000	7,000	14,000	- - -
		6K	6K	6K	18K	- - -	6,000	6,000	6,000	17,900	- - -	6,400	6,400	6,400	19,000	- - -
		6K	6K	6K	24K	- - -	5,300	5,300	5,300	21,400	- - -	5,700	5,700	5,700	22,600	- - -
		6K	6K	9K	9K	- - -	6,600	6,600	9,900	9,900	- - -	7,000	7,000	10,500	10,500	- - -
		6K	6K	9K	12K	- - -	6,300	6,300	9,400	12,600	- - -	6,700	6,700	10,000	13,300	- - -
		6K	6K	9K	18K	- - -	5,700	5,700	8,500	17,000	- - -	6,000	6,000	9,000	18,000	- - -
		6K	6K	9K	24K	- - -	5,000	5,000	7,500	20,100	- - -	5,300	5,300	8,000	21,200	- - -
		6K	6K	12K	12K	- - -	6,000	6,000	12,000	12,000	- - -	6,400	6,400	12,700	12,700	- - -
		6K	6K	12K	18K	- - -	5,300	5,300	10,700	16,000	- - -	5,700	5,700	11,300	17,000	- - -
		6K	6K	12K	24K	- - -	4,700	4,700	9,400	18,900	- - -	5,000	5,000	10,000	19,900	- - -
		6K	9K	9K	9K	- - -	6,300	9,400	9,400	9,400	- - -	6,700	10,000	10,000	10,000	- - -
		6K	9K	9K	12K	- - -	6,000	9,000	9,000	12,000	- - -	6,400	9,500	9,500	12,700	- - -
		6K	9K	9K	18K	- - -	5,300	8,000	8,000	16,000	- - -	5,700	8,500	8,500	17,000	- - -
		6K	9K	9K	24K	- - -	4,700	7,100	7,100	18,900	- - -	5,000	7,500	7,500	19,900	- - -
		6K	9K	12K	12K	- - -	5,700	8,500	11,300	11,300	- - -	6,000	9,000	12,000	12,000	- - -
		6K	9K	12K	18K	- - -	5,000	7,500	10,100	15,100	- - -	5,300	8,000	10,600	15,900	- - -
		6K	12K	12K	12K	- - -	5,300	10,700	10,700	10,700	- - -	5,700	11,300	11,300	11,300	- - -
		6K	12K	12K	18K	- - -	4,700	9,400	9,400	14,100	- - -	5,000	10,000	10,000	14,900	- - -
		9K	9K	9K	9K	- - -	9,000	9,000	9,000	9,000	- - -	9,500	9,500	9,500	9,500	- - -
		9K	9K	9K	12K	- - -	8,500	8,500	8,500	11,300	- - -	9,000	9,000	9,000	12,000	- - -
		9K	9K	9K	18K	- - -	7,500	7,500	7,500	15,100	- - -	8,000	8,000	8,000	15,900	- - -
		9K	9K	12K	12K	- - -	8,000	8,000	10,700	10,700	- - -	8,500	8,500	11,300	11,300	- - -

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB / MPC036S4M	4	9K	9K	12K	18K	- - -	7,100	7,100	9,400	14,100	- - -	7,500	7,500	10,000	14,900	- - -
		9K	12K	12K	12K	- - -	7,500	10,100	10,100	10,100	- - -	8,000	10,600	10,600	10,600	- - -
		12K	12K	12K	12K	- - -	9,400	9,400	9,400	9,400	- - -	10,000	10,000	10,000	10,000	- - -
MLB / MPC048S4M	2	9K	24K	- - -	- - -	- - -	9,000	24,000	- - -	- - -	- - -	9,400	25,100	- - -	- - -	- - -
		9K	30K	- - -	- - -	- - -	8,000	29,000	- - -	- - -	- - -	9,100	30,400	- - -	- - -	- - -
		9K	36K	- - -	- - -	- - -	8,000	33,000	- - -	- - -	- - -	8,600	34,500	- - -	- - -	- - -
		12K	24K	- - -	- - -	- - -	11,000	23,000	- - -	- - -	- - -	12,400	24,800	- - -	- - -	- - -
		12K	30K	- - -	- - -	- - -	11,000	28,000	- - -	- - -	- - -	11,900	29,600	- - -	- - -	- - -
		12K	36K	- - -	- - -	- - -	10,000	31,000	- - -	- - -	- - -	11,100	33,200	- - -	- - -	- - -
		18K	18K	- - -	- - -	- - -	17,000	17,000	- - -	- - -	- - -	18,600	18,600	- - -	- - -	- - -
		18K	24K	- - -	- - -	- - -	17,000	22,000	- - -	- - -	- - -	17,800	23,700	- - -	- - -	- - -
		18K	30K	- - -	- - -	- - -	15,000	26,000	- - -	- - -	- - -	16,600	27,600	- - -	- - -	- - -
		18K	36K	- - -	- - -	- - -	14,000	28,000	- - -	- - -	- - -	15,000	30,000	- - -	- - -	- - -
		24K	30K	- - -	- - -	- - -	18,000	23,000	- - -	- - -	- - -	20,000	25,000	- - -	- - -	- - -
		24K	36K	- - -	- - -	- - -	15,000	23,000	- - -	- - -	- - -	17,300	26,000	- - -	- - -	- - -
		30K	30K	- - -	- - -	- - -	19,000	19,000	- - -	- - -	- - -	21,700	21,700	- - -	- - -	- - -
	3	6K	6K	24K	- - -	- - -	6,000	6,000	24,000	- - -	- - -	6,400	6,400	25,500	- - -	- - -
		6K	6K	30K	- - -	- - -	6,000	6,000	29,000	- - -	- - -	6,100	6,100	30,100	- - -	- - -
		6K	6K	36K	- - -	- - -	5,000	5,000	33,000	- - -	- - -	5,800	5,800	34,300	- - -	- - -
		6K	9K	24K	- - -	- - -	6,000	9,000	23,000	- - -	- - -	6,200	9,300	24,800	- - -	- - -
		6K	9K	30K	- - -	- - -	6,000	8,000	28,000	- - -	- - -	5,900	8,800	29,300	- - -	- - -
		6K	9K	36K	- - -	- - -	5,000	8,000	32,000	- - -	- - -	5,600	8,400	33,500	- - -	- - -
		6K	12K	18K	- - -	- - -	6,000	12,000	18,000	- - -	- - -	6,400	12,800	19,100	- - -	- - -
		6K	12K	24K	- - -	- - -	6,000	11,000	23,000	- - -	- - -	6,100	12,100	24,100	- - -	- - -
		6K	12K	30K	- - -	- - -	5,000	11,000	27,000	- - -	- - -	5,800	11,500	28,600	- - -	- - -
		6K	12K	36K	- - -	- - -	5,000	10,000	31,000	- - -	- - -	5,500	10,900	32,700	- - -	- - -
		6K	18K	18K	- - -	- - -	6,000	17,000	17,000	- - -	- - -	6,100	18,100	18,100	- - -	- - -
		6K	18K	24K	- - -	- - -	5,000	16,000	22,000	- - -	- - -	5,800	17,200	22,900	- - -	- - -
		6K	18K	30K	- - -	- - -	5,000	15,000	26,000	- - -	- - -	5,500	16,400	27,300	- - -	- - -
		6K	18K	36K	- - -	- - -	5,000	14,000	29,000	- - -	- - -	5,300	15,700	31,400	- - -	- - -
		6K	24K	24K	- - -	- - -	5,000	20,000	20,000	- - -	- - -	5,500	21,800	21,800	- - -	- - -
		6K	24K	30K	- - -	- - -	5,000	19,000	24,000	- - -	- - -	5,300	21,000	26,200	- - -	- - -
		9K	9K	18K	- - -	- - -	9,000	9,000	18,000	- - -	- - -	9,600	9,600	19,100	- - -	- - -
		9K	9K	24K	- - -	- - -	9,000	9,000	23,000	- - -	- - -	9,100	9,100	24,100	- - -	- - -
		9K	9K	30K	- - -	- - -	8,000	8,000	27,000	- - -	- - -	8,600	8,600	28,600	- - -	- - -
		9K	9K	36K	- - -	- - -	8,000	8,000	31,000	- - -	- - -	8,200	8,200	32,700	- - -	- - -
		9K	12K	12K	- - -	- - -	9,000	12,000	12,000	- - -	- - -	9,900	13,200	13,200	- - -	- - -
		9K	12K	18K	- - -	- - -	9,000	12,000	18,000	- - -	- - -	9,300	12,400	18,600	- - -	- - -
		9K	12K	24K	- - -	- - -	8,000	11,000	22,000	- - -	- - -	8,800	11,800	23,500	- - -	- - -
		9K	12K	30K	- - -	- - -	8,000	11,000	26,000	- - -	- - -	8,400	11,200	27,900	- - -	- - -
		9K	12K	36K	- - -	- - -	7,000	10,000	30,000	- - -	- - -	8,100	10,700	32,100	- - -	- - -
		9K	18K	18K	- - -	- - -	8,000	17,000	17,000	- - -	- - -	8,800	17,600	17,600	- - -	- - -
		9K	18K	24K	- - -	- - -	8,000	16,000	21,000	- - -	- - -	8,400	16,800	22,300	- - -	- - -
		9K	18K	30K	- - -	- - -	7,000	15,000	25,000	- - -	- - -	8,100	16,100	26,700	- - -	- - -
		9K	18K	36K	- - -	- - -	7,000	14,000	28,000	- - -	- - -	7,800	15,500	30,900	- - -	- - -
		9K	24K	24K	- - -	- - -	7,000	20,000	20,000	- - -	- - -	8,100	21,400	21,400	- - -	- - -
		9K	24K	30K	- - -	- - -	7,000	19,000	23,000	- - -	- - -	7,800	20,600	25,700	- - -	- - -
		12K	12K	12K	- - -	- - -	12,000	12,000	12,000	- - -	- - -	12,800	12,800	12,800	- - -	- - -
		12K	12K	18K	- - -	- - -	11,000	11,000	17,000	- - -	- - -	12,100	12,100	18,100	- - -	- - -
		12K	12K	24K	- - -	- - -	11,000	11,000	22,000	- - -	- - -	11,500	11,500	22,900	- - -	- - -
		12K	12K	30K	- - -	- - -	10,000	10,000	26,000	- - -	- - -	10,900	10,900	27,300	- - -	- - -
		12K	12K	36K	- - -	- - -	10,000	10,000	29,000	- - -	- - -	10,500	10,500	31,400	- - -	- - -

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB / MPC048S4M	3	12K	18K	18K	- - -	- - -	11,000	16,000	16,000	- - -	- - -	11,500	17,200	17,200	- - -	- - -
		12K	18K	24K	- - -	- - -	10,000	15,000	20,000	- - -	- - -	10,900	16,400	21,800	- - -	- - -
		12K	18K	30K	- - -	- - -	10,000	14,000	24,000	- - -	- - -	10,500	15,700	26,200	- - -	- - -
		12K	24K	24K	- - -	- - -	10,000	19,000	19,000	- - -	- - -	10,500	21,000	21,000	- - -	- - -
		18K	18K	18K	- - -	- - -	15,000	15,000	15,000	- - -	- - -	16,400	16,400	16,400	- - -	- - -
		18K	18K	24K	- - -	- - -	14,000	14,000	19,000	- - -	- - -	15,700	15,700	21,000	- - -	- - -
	4	6K	6K	6K	18K	- - -	6,000	6,000	6,000	18,000	- - -	6,500	6,500	6,500	19,400	- - -
		6K	6K	6K	24K	- - -	6,000	6,000	6,000	24,000	- - -	6,300	6,300	6,300	25,100	- - -
		6K	6K	6K	30K	- - -	6,000	6,000	6,000	29,000	- - -	6,100	6,100	6,100	30,100	- - -
		6K	6K	6K	36K	- - -	5,000	5,000	5,000	32,000	- - -	5,700	5,700	5,700	33,800	- - -
		6K	6K	9K	18K	- - -	6,000	6,000	9,000	18,000	- - -	6,400	6,400	9,600	19,100	- - -
		6K	6K	9K	24K	- - -	6,000	6,000	9,000	24,000	- - -	6,200	6,200	9,300	24,600	- - -
		6K	6K	9K	30K	- - -	6,000	6,000	8,000	28,000	- - -	5,900	5,900	8,800	29,200	- - -
		6K	6K	9K	36K	- - -	5,000	5,000	8,000	31,000	- - -	5,500	5,500	8,200	32,500	- - -
		6K	6K	12K	12K	- - -	6,000	6,000	12,000	12,000	- - -	6,500	6,500	12,900	12,900	- - -
		6K	6K	12K	18K	- - -	6,000	6,000	12,000	18,000	- - -	6,300	6,300	12,600	18,900	- - -
		6K	6K	12K	24K	- - -	6,000	6,000	11,000	23,000	- - -	6,100	6,100	12,100	24,100	- - -
		6K	6K	12K	30K	- - -	5,000	5,000	11,000	27,000	- - -	5,700	5,700	11,300	28,200	- - -
		6K	6K	12K	36K	- - -	5,000	5,000	10,000	30,000	- - -	5,200	5,200	10,400	31,000	- - -
		6K	6K	18K	18K	- - -	6,000	6,000	17,000	17,000	- - -	6,100	6,100	18,100	18,100	- - -
		6K	6K	18K	24K	- - -	5,000	5,000	16,000	22,000	- - -	5,700	5,700	16,900	22,600	- - -
		6K	6K	18K	30K	- - -	5,000	5,000	15,000	25,000	- - -	5,200	5,200	15,500	25,800	- - -
		6K	6K	24K	24K	- - -	5,000	5,000	20,000	20,000	- - -	5,200	5,200	20,700	20,700	- - -
		6K	9K	9K	12K	- - -	6,000	9,000	9,000	12,000	- - -	6,500	9,700	9,700	12,900	- - -
		6K	9K	9K	18K	- - -	6,000	9,000	9,000	18,000	- - -	6,300	9,500	9,500	18,900	- - -
		6K	9K	9K	24K	- - -	6,000	9,000	9,000	23,000	- - -	6,100	9,100	9,100	24,100	- - -
		6K	9K	9K	30K	- - -	5,000	8,000	8,000	27,000	- - -	5,700	8,500	8,500	28,200	- - -
		6K	9K	9K	36K	- - -	5,000	7,000	7,000	30,000	- - -	5,200	7,800	7,800	31,000	- - -
		6K	9K	12K	12K	- - -	6,000	9,000	12,000	12,000	- - -	6,400	9,600	12,800	12,800	- - -
		6K	9K	12K	18K	- - -	6,000	9,000	12,000	18,000	- - -	6,200	9,300	12,300	18,500	- - -
		6K	9K	12K	24K	- - -	6,000	8,000	11,000	22,000	- - -	5,900	8,800	11,700	23,400	- - -
		6K	9K	12K	30K	- - -	5,000	8,000	10,000	26,000	- - -	5,500	8,200	10,900	27,100	- - -
		6K	9K	12K	36K	- - -	5,000	7,000	9,000	28,000	- - -	4,900	7,400	9,800	29,300	- - -
		6K	9K	18K	18K	- - -	6,000	8,000	17,000	17,000	- - -	5,900	8,800	17,500	17,500	- - -
		6K	9K	18K	24K	- - -	5,000	8,000	16,000	21,000	- - -	5,500	8,200	16,300	21,700	- - -
		6K	9K	18K	30K	- - -	5,000	7,000	14,000	24,000	- - -	4,900	7,400	14,700	24,500	- - -
		6K	12K	12K	12K	- - -	6,000	12,000	12,000	12,000	- - -	6,300	12,600	12,600	12,600	- - -
		6K	12K	12K	18K	- - -	6,000	11,000	11,000	17,000	- - -	6,100	12,100	12,100	18,100	- - -
		6K	12K	12K	24K	- - -	5,000	11,000	11,000	22,000	- - -	5,700	11,300	11,300	22,600	- - -
		6K	12K	12K	30K	- - -	5,000	10,000	10,000	25,000	- - -	5,200	10,400	10,400	25,800	- - -
		6K	12K	18K	18K	- - -	5,000	11,000	16,000	16,000	- - -	5,700	11,300	16,900	16,900	- - -
		6K	12K	18K	24K	- - -	5,000	10,000	15,000	20,000	- - -	5,200	10,400	15,500	20,700	- - -
		9K	9K	9K	9K	- - -	9,000	9,000	9,000	9,000	- - -	9,700	9,700	9,700	9,700	- - -
		9K	9K	9K	12K	- - -	9,000	9,000	9,000	12,000	- - -	9,600	9,600	9,600	12,800	- - -

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB / MPC048S4M	4	9K	9K	9K	18K	- - -	9,000	9,000	9,000	18,000	- - -	9,300	9,300	9,300	18,500	- - -
		9K	9K	9K	24K	- - -	8,000	8,000	8,000	22,000	- - -	8,800	8,800	8,800	23,400	- - -
		9K	9K	9K	30K	- - -	8,000	8,000	8,000	26,000	- - -	8,200	8,200	8,200	27,100	- - -
		9K	9K	9K	36K	- - -	7,000	7,000	7,000	28,000	- - -	7,400	7,400	7,400	29,300	- - -
		9K	9K	12K	12K	- - -	9,000	9,000	12,000	12,000	- - -	9,500	9,500	12,600	12,600	- - -
		9K	9K	12K	18K	- - -	9,000	9,000	11,000	17,000	- - -	9,100	9,100	12,100	18,100	- - -
		9K	9K	12K	24K	- - -	8,000	8,000	11,000	22,000	- - -	8,500	8,500	11,300	22,600	- - -
		9K	9K	12K	30K	- - -	7,000	7,000	10,000	25,000	- - -	7,800	7,800	10,400	25,800	- - -
		9K	9K	18K	18K	- - -	8,000	8,000	16,000	16,000	- - -	8,500	8,500	16,900	16,900	- - -
		9K	9K	18K	24K	- - -	7,000	7,000	15,000	20,000	- - -	7,800	7,800	15,500	20,700	- - -
		9K	12K	12K	12K	- - -	9,000	12,000	12,000	12,000	- - -	9,300	12,300	12,300	12,300	- - -
		9K	12K	12K	18K	- - -	8,000	11,000	11,000	17,000	- - -	8,800	11,700	11,700	17,500	- - -
		9K	12K	12K	24K	- - -	8,000	10,000	10,000	21,000	- - -	8,200	10,900	10,900	21,700	- - -
		9K	12K	12K	30K	- - -	7,000	9,000	9,000	24,000	- - -	7,400	9,800	9,800	24,500	- - -
		9K	12K	18K	18K	- - -	8,000	10,000	16,000	16,000	- - -	8,200	10,900	16,300	16,300	- - -
		9K	12K	18K	24K	- - -	7,000	9,000	14,000	19,000	- - -	7,400	9,800	14,700	19,600	- - -
		12K	12K	12K	12K	- - -	11,000	11,000	11,000	11,000	- - -	12,100	12,100	12,100	12,100	- - -
		12K	12K	12K	18K	- - -	11,000	11,000	11,000	16,000	- - -	11,300	11,300	11,300	16,900	- - -
		12K	12K	12K	24K	- - -	10,000	10,000	10,000	20,000	- - -	10,400	10,400	10,400	20,700	- - -
		12K	12K	18K	18K	- - -	10,000	10,000	15,000	15,000	- - -	10,400	10,400	15,500	15,500	- - -
	5	6K	6K	6K	6K	9K	6,000	6,000	6,000	6,000	9,000	7,000	7,000	7,000	7,000	10,000
		6K	6K	6K	6K	12K	6,000	6,000	6,000	6,000	12,000	6,000	6,000	6,000	6,000	13,000
		6K	6K	6K	6K	18K	6,000	6,000	6,000	6,000	18,000	6,000	6,000	6,000	6,000	19,000
		6K	6K	6K	6K	24K	6,000	6,000	6,000	6,000	24,000	6,000	6,000	6,000	6,000	25,000
		6K	6K	6K	6K	30K	6,000	6,000	6,000	6,000	28,000	5,000	5,000	5,000	5,000	29,000
		6K	6K	6K	6K	36K	5,000	5,000	5,000	5,000	31,000	5,000	5,000	5,000	5,000	32,000
		6K	6K	6K	9K	9K	6,000	6,000	6,000	9,000	9,000	6,000	6,000	6,000	10,000	10,000
		6K	6K	6K	9K	12K	6,000	6,000	6,000	9,000	12,000	6,000	6,000	6,000	10,000	13,000
		6K	6K	6K	9K	18K	6,000	6,000	6,000	9,000	18,000	6,000	6,000	6,000	9,000	19,000
		6K	6K	6K	9K	24K	6,000	6,000	6,000	9,000	23,000	6,000	6,000	6,000	9,000	24,000
		6K	6K	6K	9K	30K	5,000	5,000	5,000	8,000	27,000	5,000	5,000	5,000	8,000	28,000
		6K	6K	6K	9K	36K	5,000	5,000	5,000	7,000	29,000	5,000	5,000	5,000	7,000	31,000
		6K	6K	6K	12K	12K	6,000	6,000	6,000	12,000	12,000	6,000	6,000	6,000	13,000	13,000
		6K	6K	6K	12K	18K	6,000	6,000	6,000	12,000	18,000	6,000	6,000	6,000	12,000	18,000
		6K	6K	6K	12K	24K	6,000	6,000	6,000	11,000	22,000	5,000	5,000	5,000	11,000	23,000
		6K	6K	6K	12K	30K	5,000	5,000	5,000	10,000	26,000	5,000	5,000	5,000	10,000	27,000
		6K	6K	6K	18K	18K	6,000	6,000	6,000	17,000	17,000	5,000	5,000	5,000	17,000	17,000
		6K	6K	6K	18K	24K	5,000	5,000	5,000	16,000	21,000	5,000	5,000	5,000	16,000	21,000
		6K	6K	9K	9K	9K	6,000	6,000	9,000	9,000	9,000	6,000	6,000	10,000	10,000	10,000
		6K	6K	9K	9K	12K	6,000	6,000	9,000	9,000	12,000	6,000	6,000	9,000	9,000	13,000
		6K	6K	9K	9K	18K	6,000	6,000	9,000	9,000	18,000	6,000	6,000	9,000	9,000	18,000
		6K	6K	9K	9K	24K	6,000	6,000	8,000	8,000	22,000	5,000	5,000	8,000	8,000	23,000
		6K	6K	9K	9K	30K	5,000	5,000	8,000	8,000	26,000	5,000	5,000	8,000	8,000	27,000

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB / MPC048S4M	5	6K	6K	9K	12K	12K	6,000	6,000	9,000	12,000	12,000	6,000	6,000	9,000	12,000	12,000
		6K	6K	9K	12K	18K	6,000	6,000	9,000	12,000	17,000	6,000	6,000	9,000	12,000	18,000
		6K	6K	9K	12K	24K	5,000	5,000	8,000	11,000	22,000	5,000	5,000	8,000	11,000	22,000
		6K	6K	9K	12K	30K	5,000	5,000	7,000	10,000	24,000	5,000	5,000	7,000	10,000	26,000
		6K	6K	9K	18K	18K	5,000	5,000	8,000	16,000	16,000	5,000	5,000	8,000	17,000	17,000
		6K	6K	9K	18K	24K	5,000	5,000	7,000	15,000	20,000	5,000	5,000	7,000	15,000	21,000
		6K	6K	12K	12K	12K	6,000	6,000	12,000	12,000	12,000	6,000	6,000	12,000	12,000	12,000
		6K	6K	12K	12K	18K	6,000	6,000	11,000	11,000	17,000	5,000	5,000	11,000	11,000	17,000
		6K	6K	12K	12K	24K	5,000	5,000	10,000	10,000	21,000	5,000	5,000	10,000	10,000	21,000
		6K	6K	12K	18K	18K	5,000	5,000	10,000	16,000	16,000	5,000	5,000	10,000	16,000	16,000
		6K	9K	9K	9K	9K	6,000	9,000	9,000	9,000	9,000	6,000	9,000	9,000	9,000	9,000
		6K	9K	9K	9K	12K	6,000	9,000	9,000	9,000	12,000	6,000	9,000	9,000	9,000	12,000
		6K	9K	9K	9K	18K	6,000	9,000	9,000	9,000	17,000	6,000	9,000	9,000	9,000	18,000
		6K	9K	9K	9K	24K	5,000	8,000	8,000	8,000	22,000	5,000	8,000	8,000	8,000	22,000
		6K	9K	9K	9K	30K	5,000	7,000	7,000	7,000	24,000	5,000	7,000	7,000	7,000	26,000
		6K	9K	9K	12K	12K	6,000	9,000	9,000	12,000	12,000	6,000	9,000	9,000	12,000	12,000
		6K	9K	9K	12K	18K	6,000	8,000	8,000	11,000	17,000	5,000	8,000	8,000	11,000	17,000
		6K	9K	9K	12K	24K	5,000	8,000	8,000	10,000	21,000	5,000	8,000	8,000	10,000	21,000
		6K	9K	9K	18K	18K	5,000	8,000	8,000	16,000	16,000	5,000	8,000	8,000	16,000	16,000
		6K	9K	12K	12K	12K	6,000	9,000	12,000	12,000	12,000	6,000	9,000	12,000	12,000	12,000
		6K	9K	12K	12K	18K	5,000	8,000	11,000	11,000	16,000	5,000	8,000	11,000	11,000	17,000
		6K	9K	12K	12K	24K	5,000	7,000	10,000	10,000	20,000	5,000	7,000	10,000	10,000	21,000
		6K	12K	12K	12K	12K	6,000	11,000	11,000	11,000	11,000	5,000	11,000	11,000	11,000	11,000
		6K	12K	12K	12K	18K	5,000	10,000	10,000	10,000	16,000	5,000	10,000	10,000	10,000	16,000
		9K	9K	9K	9K	9K	9,000	9,000	9,000	9,000	9,000	9500	9500	9500	9500	9500
		9K	9K	9K	9K	12K	9,000	9,000	9,000	9,000	12,000	9,000	9,000	9,000	9,000	12,000
		9K	9K	9K	9K	18K	8,000	8,000	8,000	8,000	17,000	8,000	8,000	8,000	8,000	17,000
		9K	9K	9K	9K	24K	8,000	8,000	8,000	8,000	21,000	8,000	8,000	8,000	8,000	21,000
		9K	9K	9K	12K	12K	9,000	9,000	9,000	12,000	12,000	9,000	9,000	9,000	12,000	12,000
		9K	9K	9K	12K	18K	8,000	8,000	8,000	11,000	16,000	8,000	8,000	8,000	11,000	17,000
		9K	9K	9K	12K	24K	7,000	7,000	7,000	10,000	20,000	7,000	7,000	7,000	10,000	21,000
		9K	9K	12K	12K	12K	8,000	8,000	11,000	11,000	11,000	8,000	8,000	11,000	11,000	11,000
		9K	9K	12K	12K	18K	8,000	8,000	10,000	10,000	16,000	8,000	8,000	10,000	10,000	16,000
		9K	12K	12K	12K	12K	8,000	11,000	11,000	11,000	11,000	8,000	11,000	11,000	11,000	11,000
		12K	12K	12K	12K	12K	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

MLB and MPC Connection and Line Set Usage

Table 2. MLB and MPC018S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)
1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	006
006	009
006	012
009	009
009	012
012	012

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

Table 3. MPC024S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)
1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	012	- - -
006	018	- - -
009	009	- - -
009	012	- - -
009	018	- - -
012	012	- - -
012	018	- - -
018	018	- - -
006	006	006
006	006	009
006	006	012
006	006	018
006	009	009
006	009	012
006	009	018
006	012	012
006	012	018
009	009	009
009	009	012
009	009	018
009	012	012
012	012	012

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

Table 4. MLB and MPC030S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)
1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	012	- - -
006	018	- - -
009	009	- - -
009	012	- - -
009	018	- - -
012	012	- - -
012	018	- - -
018	018	- - -
006	006	006
006	006	009
006	006	012
006	006	018
006	009	009
006	009	012
006	009	018
006	012	012
006	012	018
009	009	009
009	009	012
009	009	018
009	012	012
012	012	012

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

Table 5. MLB and MPC036S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	018	- - -	- - -
006	024	- - -	- - -
009	018	- - -	- - -
009	024	- - -	- - -
012	012	- - -	- - -
012	018	- - -	- - -
012	024	- - -	- - -
018	018	- - -	- - -

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

Table 5. MLB and MPC036S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
018	024	- - -	- - -
024	024	- - -	- - -
006	006	012	- - -
006	006	018	- - -
006	006	024	- - -
006	009	012	- - -
006	009	018	- - -
006	009	024	- - -
006	012	012	- - -
006	012	018	- - -
006	012	024	- - -
006	018	018	- - -
006	018	024	- - -
009	009	009	- - -
009	009	012	- - -
009	009	018	- - -
009	009	024	- - -
009	012	012	- - -
009	012	018	- - -
009	012	024	- - -
009	018	018	- - -
012	012	012	- - -
012	012	018	- - -
012	012	024	- - -
012	018	018	- - -
006	006	006	006
006	006	006	009
006	006	006	012
006	006	006	018
006	006	006	024
006	006	009	009
006	006	009	012
006	006	009	018
006	006	009	024
006	006	012	012
006	006	012	018
006	006	012	024
006	009	009	009

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

Table 5. MLB and MPC036S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	009	009	012
006	009	009	018
006	009	009	024
006	009	012	012
006	009	012	018
006	012	012	012
006	012	012	018
009	009	009	009
009	009	009	012
009	009	009	018
009	009	012	012
009	009	012	018
009	012	012	012
012	012	012	012

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
009	024	- - -	- - -	- - -
009	030	- - -	- - -	- - -
009	036	- - -	- - -	- - -
012	024	- - -	- - -	- - -
012	030	- - -	- - -	- - -
012	036	- - -	- - -	- - -
018	018	- - -	- - -	- - -
018	024	- - -	- - -	- - -
018	030	- - -	- - -	- - -
018	036	- - -	- - -	- - -
024	030	- - -	- - -	- - -
024	036	- - -	- - -	- - -
030	030	- - -	- - -	- - -
006	006	024	- - -	- - -
006	006	030	- - -	- - -

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	006	036	- - -	- - -
006	009	024	- - -	- - -
006	009	030	- - -	- - -
006	009	036	- - -	- - -
006	012	018	- - -	- - -
006	012	024	- - -	- - -
006	012	030	- - -	- - -
006	012	036	- - -	- - -
006	018	018	- - -	- - -
006	018	024	- - -	- - -
006	018	030	- - -	- - -
006	018	036	- - -	- - -
006	024	024	- - -	- - -
006	024	030	- - -	- - -
009	009	018	- - -	- - -
009	009	024	- - -	- - -
009	009	030	- - -	- - -
009	009	036	- - -	- - -
009	012	012	- - -	- - -
009	012	018	- - -	- - -
009	012	024	- - -	- - -
009	012	030	- - -	- - -
009	012	036	- - -	- - -
009	018	018	- - -	- - -
009	018	024	- - -	- - -
009	018	030	- - -	- - -
009	018	036	- - -	- - -
009	024	024	- - -	- - -
009	024	030	- - -	- - -
012	012	012	- - -	- - -
012	012	018	- - -	- - -
012	012	024	- - -	- - -
012	012	030	- - -	- - -
012	012	036	- - -	- - -
012	018	018	- - -	- - -
012	018	024	- - -	- - -
012	018	030	- - -	- - -
012	024	024	- - -	- - -

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
018	018	018	- - -	- - -
018	018	024	- - -	- - -
006	006	006	018	- - -
006	006	006	024	- - -
006	006	006	030	- - -
006	006	006	036	- - -
006	006	009	018	- - -
006	006	009	024	- - -
006	006	009	030	- - -
006	006	009	036	- - -
006	006	012	012	- - -
006	006	012	018	- - -
006	006	012	024	- - -
006	006	012	030	- - -
006	006	012	036	- - -
006	006	018	018	- - -
006	006	018	024	- - -
006	006	018	030	- - -
006	006	024	024	- - -
006	009	009	012	- - -
006	009	009	018	- - -
006	009	009	024	- - -
006	009	009	030	- - -
006	009	009	036	- - -
006	009	012	012	- - -
006	009	012	018	- - -
006	009	012	024	- - -
006	009	012	030	- - -
006	009	012	036	- - -
006	009	018	018	- - -
006	009	018	024	- - -
006	009	018	030	- - -
006	012	012	012	- - -
006	012	012	018	- - -
006	012	012	024	- - -
006	012	012	030	- - -
006	012	018	018	- - -
006	012	018	024	- - -

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
009	009	009	009	- - -
009	009	009	012	- - -
009	009	009	018	- - -
009	009	009	024	- - -
009	009	009	030	- - -
009	009	009	036	- - -
009	009	012	012	- - -
009	009	012	018	- - -
009	009	012	024	- - -
009	009	012	030	- - -
009	009	018	018	- - -
009	009	018	024	- - -
009	012	012	012	- - -
009	012	012	018	- - -
009	012	012	024	- - -
009	012	012	030	- - -
009	012	018	018	- - -
009	012	018	024	- - -
012	012	012	012	- - -
012	012	012	018	- - -
012	012	012	024	- - -
012	012	018	018	- - -
006	006	006	006	009
006	006	006	006	012
006	006	006	006	018
006	006	006	006	024
006	006	006	006	030
006	006	006	006	024
006	006	006	009	009
006	006	006	009	012
006	006	006	009	018
006	006	006	009	024
006	006	006	009	030
006	006	006	009	036
006	006	006	012	012
006	006	006	012	018
006	006	006	012	024
006	006	006	012	030

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

Number of Zones and Outdoor Unit Connection Sizes
NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
006	006	006	018	018
006	006	006	018	024
006	006	009	009	009
006	006	009	009	012
006	006	009	009	018
006	006	009	009	024
006	006	009	009	030
006	006	009	012	012
006	006	009	012	018
006	006	009	012	024
006	006	009	012	030
006	006	009	018	018
006	006	009	018	024
006	006	012	012	012
006	006	012	012	018
006	006	012	012	024
006	006	012	018	018
006	009	009	009	009
006	009	009	009	012
006	009	009	009	018
006	009	009	009	024
006	009	009	009	030
006	009	009	012	012
006	009	009	012	018
006	009	009	012	024
006	009	009	018	018
006	009	012	012	012
006	009	012	012	018
006	009	012	012	024
006	012	012	012	012
006	012	012	012	018
009	009	009	009	009
009	009	009	009	012
009	009	009	009	018
009	009	009	009	024
009	009	009	012	012
009	009	009	012	018
009	009	009	012	024

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

Number of Zones and Outdoor Unit Connection Sizes NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit				
Zone 1 (A)	**Zone 2 (B)**	**Zone 3 (C)**	**Zone 4 (D)**	**Zone 5 (E)**
1/4 in. liq + 1/2 in. gas	**1/4 in. liq + 1/2 in. gas**	**1/4 in. liq + 3/8 in. gas**	**1/4 in. liq + 3/8 in. gas**	**1/4 in. liq + 3/8 in. gas**
009	009	012	012	012
009	009	012	012	018
009	012	012	012	012
012	012	012	012	012

LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).
1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Torque Requirements for Caps and Fasteners

When servicing or repairing HVAC components, ensure the fasteners are appropriately tightened. “Table 7. Torque Requirements” provides torque values for fasteners.

IMPORTANT

Only use Allen wrenches of sufficient hardness (50Rc - Rockwell scale minimum). Fully insert the wrench into the valve stem recess.

Service valve stems are factory-torqued from 9 ft.-lbs. (12 N*m) for small valves, to 25 ft.-lbs. (34 N*m) for large valves) to prevent refrigerant loss during shipping and handling. Using an Allen wrench rated at less than 50Rc risks rounding or breaking off the wrench, or stripping the valve stem recess.

See the Lennox Service and Application Notes C-08-1 for further details and information.

Table 7. Torque Requirements

Parts	Recommended Torque	
	U.S.	Newton-Meter- N
Service valve cap	8 ft.-lb.	11
Sheet metal screws	16 in.-lb.	2
Machine screws #10	27 in.-lb.	3
Compressor bolts	7 ft.-lb.	10
Gauge port seal cap	8 ft.-lb.	11

Outdoor Unit Installation

Placement Considerations

⚠CAUTION

In order to avoid injury, take proper precaution when lifting heavy objects.

Consider the following when positioning the unit:

- In coastal areas or other places with salty atmosphere of sulfate gas, corrosion may shorten the life of the unit. In coastal areas, the coil should be cleaned with potable water several times per year to avoid corrosive buildup (salt).
- Some localities are adopting sound ordinances based on the unit’s sound level registered from the adjacent property, not from the property where the unit is installed. Install the unit as far as possible from the property line.
- When possible, do not install the unit directly outside a window. Glass has a very high level of sound transmission.
- Install unit level.

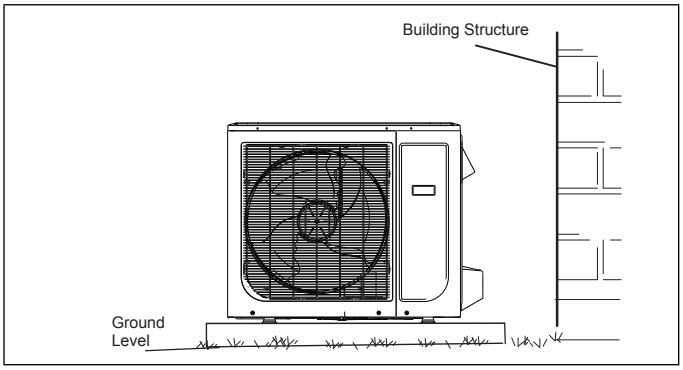


Figure 5. Install Unit Level

- Choose a place solid enough to bear the weight and vibration of the unit, where the operation noise will not be amplified.
- Choose a location where the hot air discharged from the unit or the operation noise will not be a nuisance to neighbors.
- Avoid installing the outdoor unit near a bedroom or other places where noise may cause a problem.
- There must be sufficient space to carry the unit into and out of the site.
- There must be unobstructed air flow around the air inlet and the air outlet.
- The unit must not be installed in areas where a flammable gas leak may occur.

- Install the outdoor unit a minimum of 3 feet (1m) away from any antenna, power cord (line), radio, telephone, security system, or intercom. Electrical interference and radio frequencies from any of these sources may affect operation.
- Since water drains from the outdoor unit during various stages of operation, do not place anything which may be damaged by moisture under the unit.

Direct Sunlight, Rain, Snow and Ice Protection

Indoor Unit

- It is recommended that Medium Static Ducted Indoor Units not be installed in unconditioned spaces with temperatures above 100°F (38°C).

Outdoor Unit:

- The construction of a canopy or shade is suggested when the outdoor unit is placed in direct sunlight all day with temperatures exceeding 100°F (38°C). This is necessary because of an ambient limit control set to 122°F (50°C) to protect the electronics. If the outdoor unit is placed in direct sunlight it is possible that the limit may activate and shut down the unit. A canopy is recommended as illustrated in “Figure 6. Outdoor Unit on Pedestal (Stand) and Protective Canopy” on page 21 or “Figure 11. Dog House-Style Shelter” on page 22.
- Place outdoor unit away from overhanging roof lines which would allow water or ice to drop on, or in front of, coil or into unit. Construct a canopy as illustrated in “Figure 6. Outdoor Unit on Pedestal (Stand) and Protective Canopy” on page 21.
- The outdoor unit base should be elevated above the depth of average snows as illustrated in “Figure 7. Outdoor Unit on Brackets above Snow Line” on page 21.
- In heavy snow areas, do not place the outdoor unit where drifting will occur as illustrated in “Figure 8. Outdoor Unit Air Flow Obstructed by Snow” on page 21.
- Carefully consider how to manage defrost water disposal to prevent ice from blocking walkways or creating a safety hazard near the outdoor unit as illustrated in “Figure 9. Avoid Defrost Water Ice Hazard” on page 22.

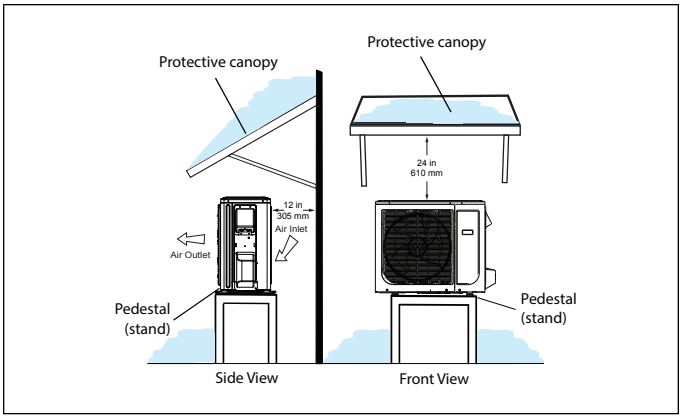


Figure 6. Outdoor Unit on Pedestal (Stand) and Protective Canopy

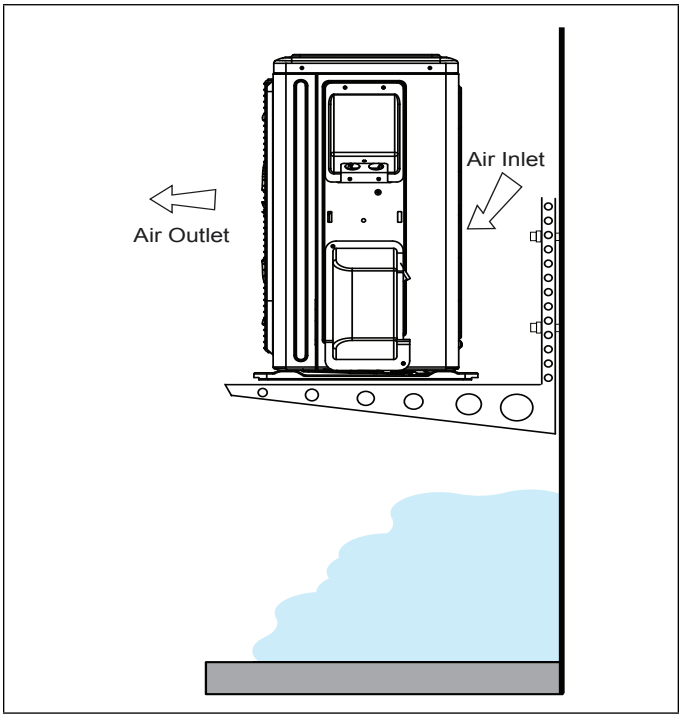


Figure 7. Outdoor Unit on Brackets above Snow Line

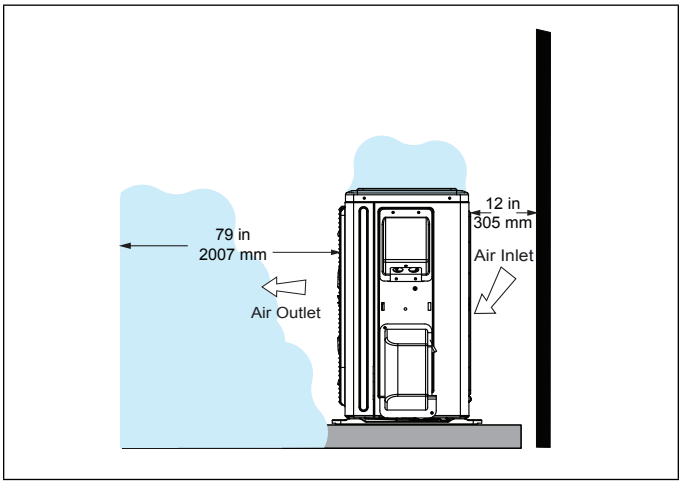


Figure 8. Outdoor Unit Air Flow Obstructed by Snow

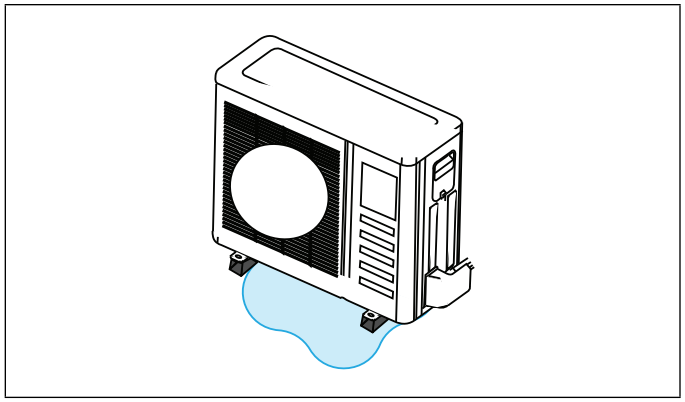


Figure 9. Avoid Defrost Water Ice Hazard

Prevailing Winds

Normally wind baffles are not required for a outdoor unit. However, in order to maximize reliability and performance, the following best practices should be followed.

If unit coil cannot be installed away from prevailing winter winds, some method of protecting the coil is recommended. However, minimum clearances as reference in “Figure 3. Outdoor Unit Clearances - Inches (mm)” on page 4 must be observed at all times.

Common application examples are:

- When prevailing winds are from the air inlet side, then position the wind barrier a minimum of 12 inches (305 mm) from the unit as illustrated in “Figure 3. Outdoor Unit Clearances - Inches (mm)”.
- When prevailing wind is into the discharge side, then position the wind barrier a minimum 79 inches (2007 mm) from the front of the unit as illustrated in “Figure 10. Wind Barrier”.
- Outdoor unit can be installed in a dog house style shelter as illustrated in”Figure 11. Dog House-Style Shelter”.
- Outdoor unit can be installed in a alcove or under a roof overhang as illustrated in “Figure 12. Unit installed in Alcove”.

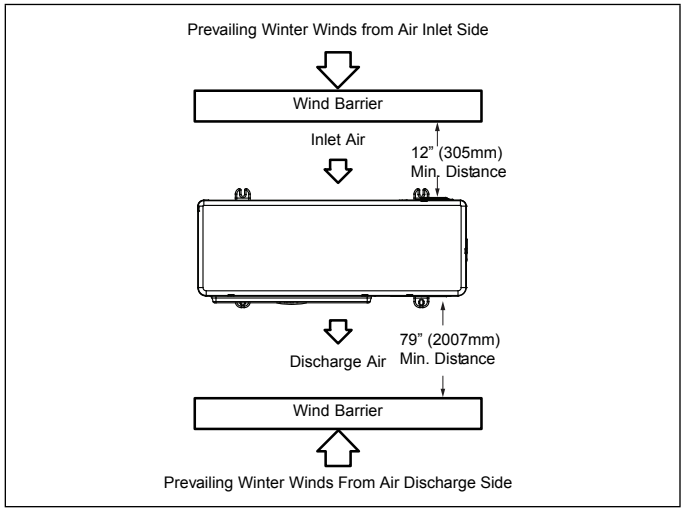


Figure 10. Wind Barrier

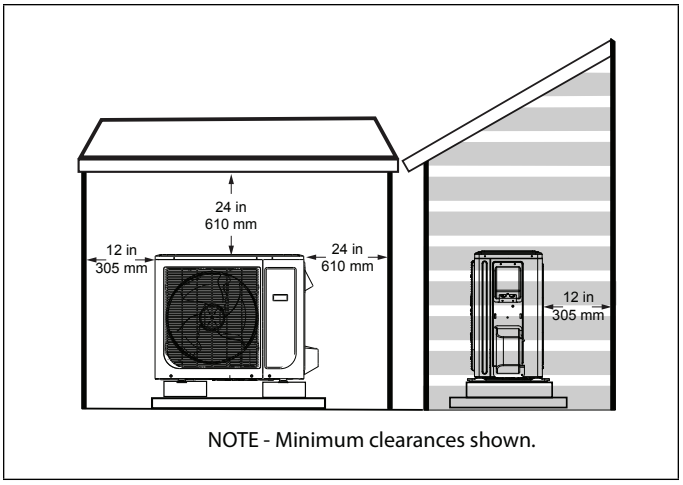


Figure 11. Dog House-Style Shelter

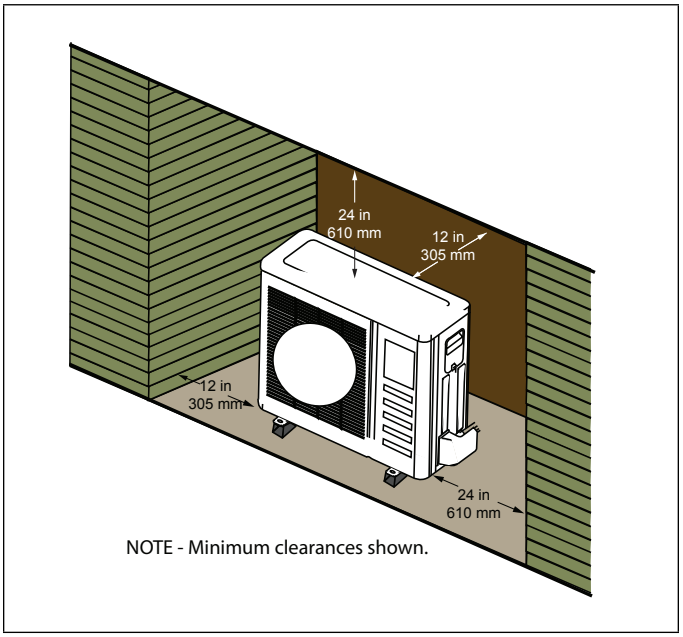


Figure 12. Unit installed in Alcove

Buried Refrigerant Pipe Protection

- **All** refrigerant lines must be insulated regardless of if it is buried
- In addition to insulating each line of piping, buried lines must rest inside a **sealed, watertight** conduit
- The conduit must be designed so it cannot collect and retain water

Outdoor Unit Condensate Piping

Condensate formed during the heating and defrost processes must be drained from heat pump units. Drain holes are provided in the base of the units to ensure proper drainage. Heat pumps must be raised when installed on a concrete pad or the ground to allow drainage to occur. If the heat pump unit is installed on wall mounting bracket, insert the provided drain connector into one of the 1 inch (25 mm) drain holes and attached a field-provided insulated drain hose to the connector. Use field-provided rubber plugs to cover any unused drain holes.

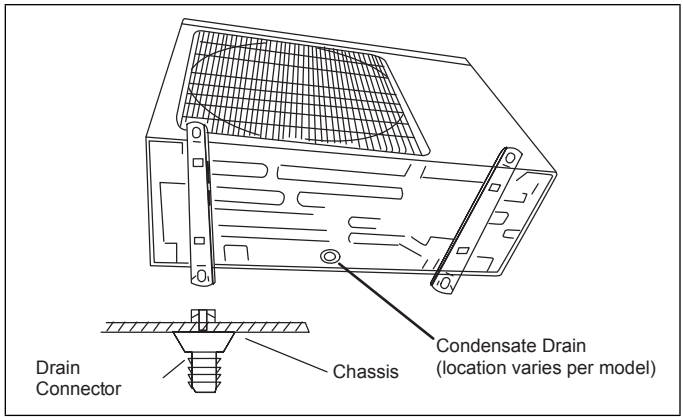


Figure 13. Condensate Drain

Securing the Outdoor Unit

Slab or Roof Mounting

Install the unit a minimum of 4 inches (102 mm) above the roof or ground surface to avoid ice build-up around the unit. Place the unit above a load bearing wall or area of the roof that can adequately support the unit. Consult local codes for rooftop applications.

⚠CAUTION

Roof Damage!

This system contains both refrigerant and oil. Some rubber roofing material may absorb oil. This will cause the rubber to swell when it comes into contact with oil. The rubber will then bubble and could cause leaks. Protect the roof surface to avoid exposure to refrigerant and oil during service and installation. Failure to follow this notice could result in damage to roof surface.

Securing Outdoor Unit to Slab, Frame, or Rails

If the outdoor unit is installed on a field-provided slab or frame, use lag bolts or equivalent to secure the outdoor unit to the slab or frame.

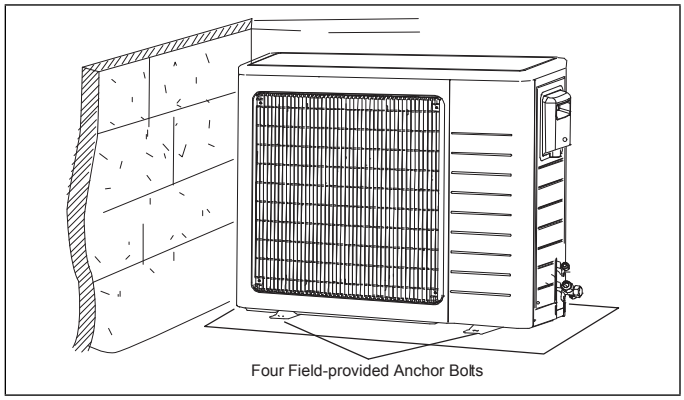


Figure 14. Securing Outdoor Unit to Slab

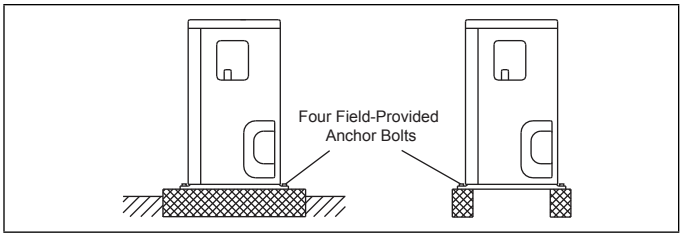


Figure 15. Securing Outdoor Unit to Rails

Securing Outdoor Unit To Hanging Brackets

If the outdoor unit is installed on field-provided wall mounting brackets, use lag bolts or equivalent to secure the outdoor unit to the bracket. Minimum rear clearance can be reduced to 6 inches (152 mm) when mounted on brackets and with no obstructions on the other three sides. Allow for condensate disposal when placing units above one another.

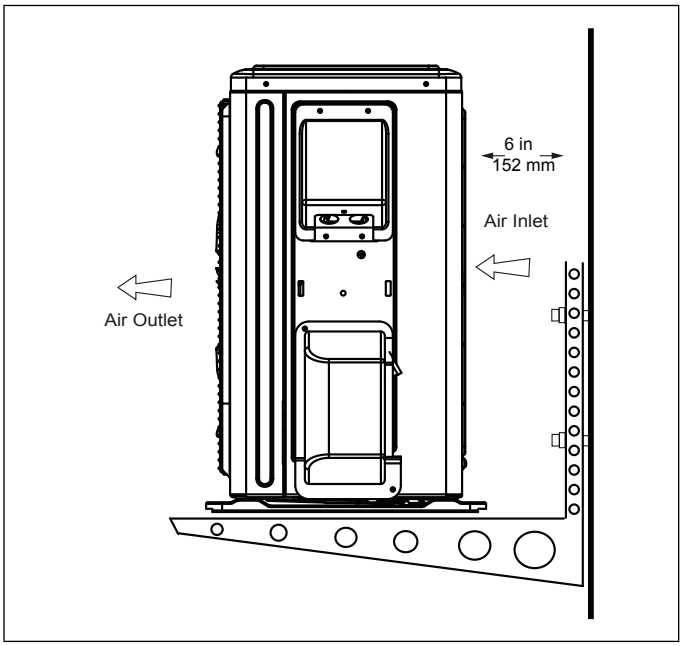


Figure 16. Securing Outdoor Unit to Brackets

Refrigerant Piping Connections

Line sets consists of two copper pipes connecting the outdoor unit to the indoor unit. “Table 9. Refrigerant Piping and Indoor Unit Connection Sizes” on page 24 lists the connection sizes. The connections are made using the provided brass flare nuts at the end of the refrigerant piping connections.

1. Choose the correct pipe sizes for your application using “Table 9. Refrigerant Piping and Indoor Unit Connection Sizes” on page 24.
2. Confirm that you are using the correct diameter piping.
3. Determine the necessary piping length required for the application.
4. Cut the selected pipes with a pipe cutter. Make the cuts flat and smooth as illustrated in “Figure 17. Cutting

Pipe".

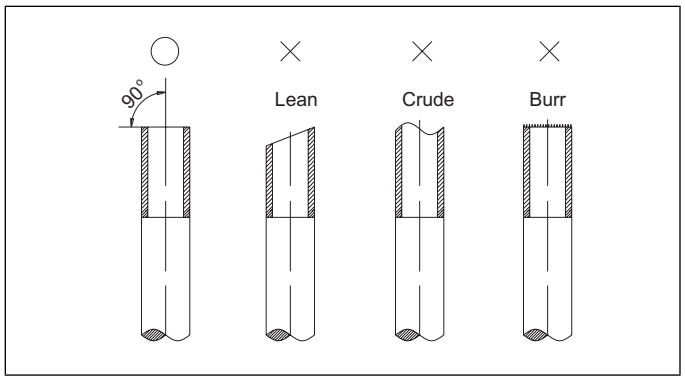
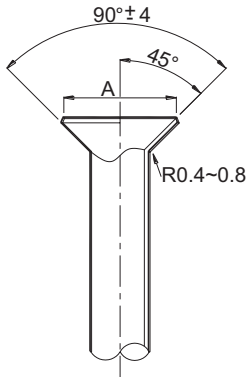


Figure 17. Cutting Pipe

5. Insulate the copper piping.
6. Insert a flare nut onto each pipe before flaring.
7. Use "Table 8. Flaring Pipe" to properly flare the pipe.

Table 8. Flaring Pipe

Pipe Diameter	Flare Dimension A (mm)		Flare Shape
	Min	Max	
1/4" (6.35)	8.3	8.7	
3/8" (9.62)	12.0	12.4	
1/2" (9.52"	15.4	15.8	
5/8" (15.9)	18.6	19.1	
3/4" (22.9)	22.9	23.3	

8. After flaring the pipe, temporarily sealed pipe ends with adhesive tape to avoid contaminants from entering the pipes.
9. The seal on the unit refrigerant piping connections should remain in place until the last possible moment. This will prevent dust or water from getting into the refrigerant piping before it is connected.
10. **CAREFULLY** adjust refrigerant piping connections to suit the application.
11. Slowly loosen one of the flare nuts to release the factory nitrogen charge from the indoor units only.
12. Remove the flare nuts from the connections on the unit and discard the seal from each of the piping connections.
13. Slide the flare nuts onto the ends of the field-provided refrigerant piping before using a suitable flaring tool to flare the end of the copper pipe.
14. Apply recommended HFC-410A refrigerant lubricant to the outside of the flared refrigerant lines.

IMPORTANT

The compressor in this unit contains PVE oil (Polyvinylether). PVE oil is formulated for hydrofluorocarbon (HFC) refrigerants, such as HFC-410A, which this system contains. While it may have some miscibility properties with mineral-based oil and POE oil (Polyolester), it is not recommended to mix PVE oil with any other type of refrigerant oil.

15. Align the threaded connections with the flared refrigerant lines. Tighten the flare nuts lightly at first to obtain a smooth match as illustrated in "Figure 18. Making Connections (Male to Female Connection)".

Table 9. Refrigerant Piping and Indoor Unit Connection Sizes

Size (Btuh)	Liquid Line in.	Gas Line in.
9000	1/4	3/8
12000	1/4	1/2
18000	1/4	1/2
24000	3/8	5/8

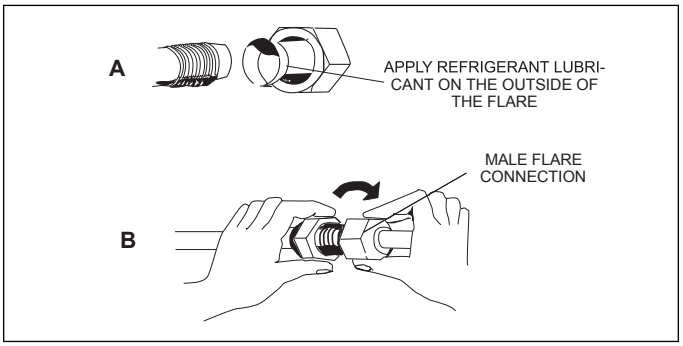


Figure 18. Making Connections (Male to Female Connection)

16. Once snug, continue another half-turn on each nut which should create a leak-free joint. A torque wrench may be used to tighten flare nuts using "Table 10. Flare Nut Torque Recommendations" recommendations. **Do not over-tighten a flared joint. Flared connections should always be accessible and must be insulated to prevent condensation.**
17. After refrigerant piping has been installed and checked for leaks, apply insulation over all flared connections.

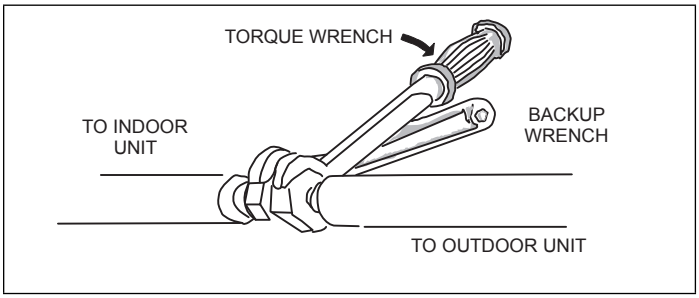


Figure 19. Tighten Flare Nut

Table 10. Flare Nut Torque Recommendations

Outside Diameter	Recommended Torque	No torque wrench available
Inches		Finger tighten and use an appropriately sized wrench to turn an additional:
1/4	15 ft.-lb. (20 N)	1/4 turn
3/8	26 ft.-lb. (35 N)	1/2 turn
1/2	41 ft.-lb. (56 N)	7/8 turn
5/8	48 ft.-lb. (65 N)	1 full turn

Indoor Unit Installation

⚠CAUTION

In order to avoid injury, take proper precaution when lifting heavy objects.

Please refer to the installation instruction included with the indoor unit for setup.

IMPORTANT

Pipe and wire to each zone separately.

Test each indoor unit separately to ensure proper operation.

Connecting Multiple Capacity Indoor Units

- The largest capacity indoor unit must be connected to the lowest refrigerant connection ports on the outdoor unit.
- The 24,000 Btu indoor unit is only allowed to be connected to MPC036S4M, MPC048S4M, MLB036S4M and MLB048S4M outdoor units.

NOTE: *Each indoor unit must be piped AND wired to the correct zone piping connections and wiring terminals. Make sure that indoor unit A is wired to the zone A terminal block and connected to the appropriate refrigerant pipe connections.*

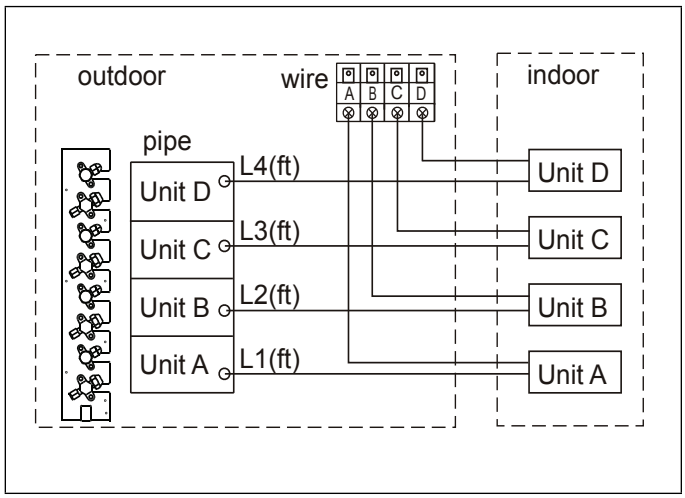


Figure 20. Pipe and Wire Each Zone Separately

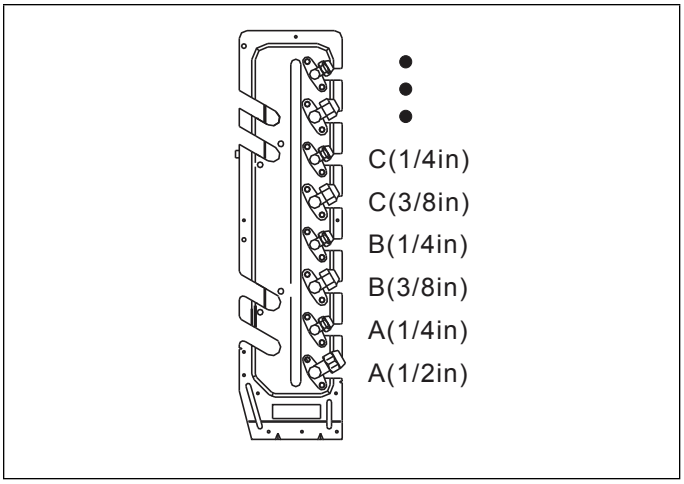


Figure 21. Connecting Multiple Capacity Indoor Units

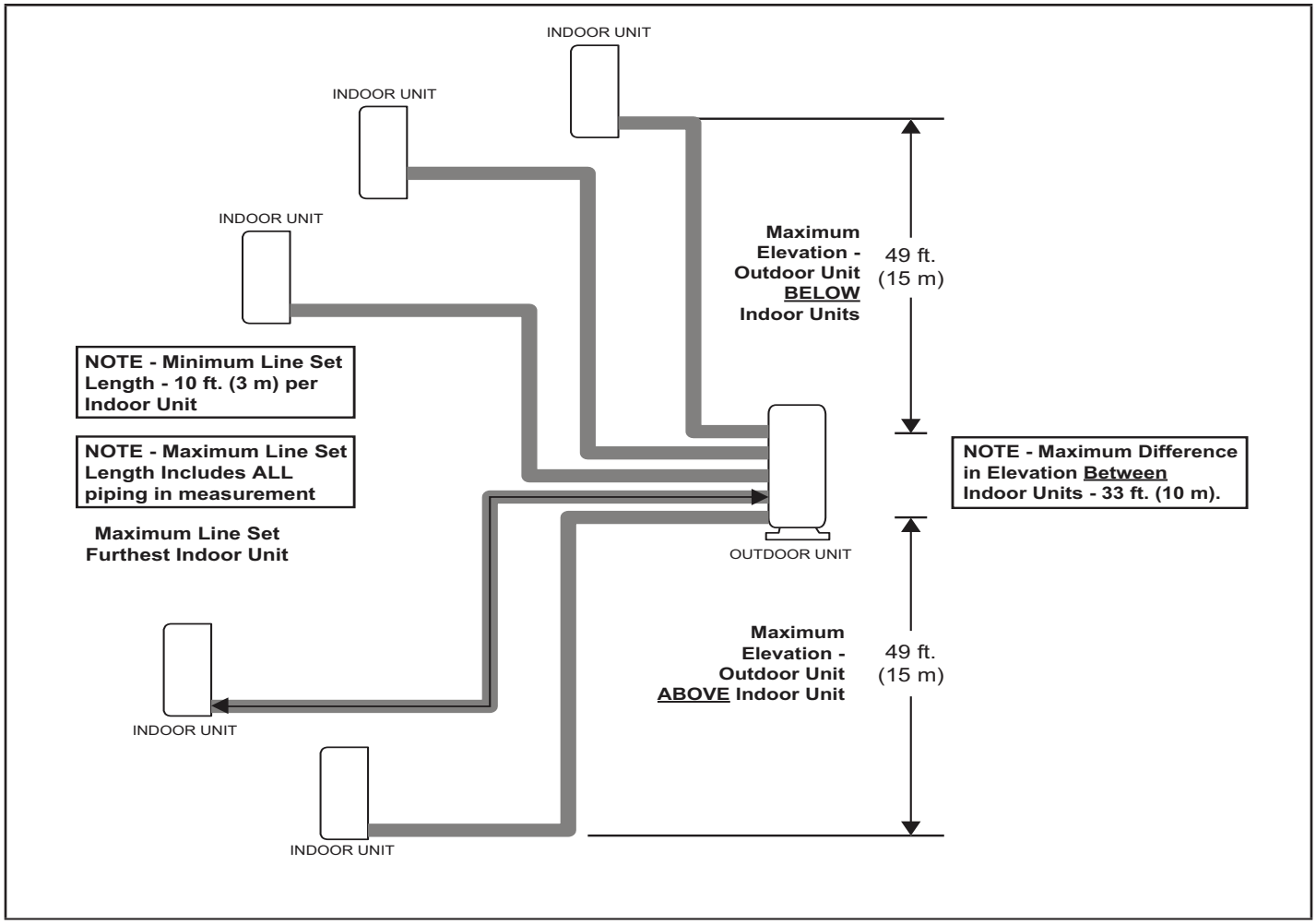


Figure 22. MLB and MPC Line Set Elevations

Table 11. Line Set Adapters

Number of Zones	Model	Number x Liquid side/ Gas side (inch)	Adapter	Adapter Quantity
2	MPC018S4M-1P	2 X (1/4"/3/8")	3/8"-->1/2"	2
3	MPC024S4M-1P MPC030S4M-1P	3 X (1/4"/3/8")	3/8"-->1/2"	3
4	MPC036S4M-1P	3x (1/4"/3/8") & 1x (1/4"/1/2")	3/8"-->1/2"	3
			1/2"-->3/8"	1
			1/4"-->3/8"	1
			1/2"-->5/8"	1
5	MPC048S4M-1P	3x (1/4"/3/8") & 2x (1/4"/1/2")	1/2"-->3/8"	2
			1/4"-->3/8"	2
			1/2"-->5/8"	2
			3/8"-->1/2"	3
2	MLB018S4M-1P	2 X (1/4"/3/8")	3/8"-->1/2"	2
3	MLB030S4M-1P	3x (1/4"/3/8")	3/8"-->1/2"	2
			1/2"-->3/8"	1
			1/4"-->3/8"	1
			1/2"-->5/8"	1

Table 11. Line Set Adapters

Number of Zones	Model	Number x Liquid side/ Gas side (inch)	Adapter	Adapter Quantity
4	MLB036S4M-1P	3x (1/4"/3/8") & 1x (1/4"/1/2")	3/8"-->1/2"	2
			1/2"-->3/8"	2
			1/4"-->3/8"	2
			1/2"-->5/8"	2
5	MLB048S4M-2P	3x (1/4"/3/8") & 2x (1/4"/1/2")	1/2"-->3/8"	2
			1/4"-->3/8"	2
			1/2"-->5/8"	2
			3/8"-->1/2"	3

Leak Test and Evacuation

Air and moisture remaining in the refrigerant system will have undesirable effects as indicated below:

- Pressure in the system rises.
- Operating current rises.
- Cooling or heating efficiency drops.
- Moisture in the refrigerant circuit may freeze.
- Water may lead to corrosion of parts in the refrigeration system.

The line set between the indoor and outdoor units must be leak tested and evacuated to remove any non-condensables and moisture from the system.

Leak Test

Use the following procedure to test for system leaks:

1. Connect the manifold gauge set and dry nitrogen gas cylinder to the liquid and gas service ports.
2. Open valve on nitrogen cylinder.
3. Pressurize the system per the pressure test specifications in "Table 12. Pressure Test Specifications".
4. Check that the system pressure remains stable. If there is any movement check system for leaks.
5. After the system is found to be free of leaks:
   - Close valve on nitrogen cylinder.
   - Relieve the nitrogen pressure by: loosening the charge hose connector at the nitrogen cylinder.
   - When the system pressure is reduced to normal, disconnect the hose from the cylinder.

IMPORTANT

Use only oxygen-free nitrogen (OFN).

Triple Evacuation Procedure

A Micron or Torr gauge must be used for this procedure.

1. Discharge the oxygen-free nitrogen and evacuate the system to a reading of 8000 Microns (8 Torr) using all service valves.
2. Break the vacuum by allowing nitrogen into the port connections (liquid and gas line pipes) until a positive pressure is achieved.
3. Evacuate the system to a reading of 5000 Microns (5 Torr).
4. Break the vacuum by allowing nitrogen into the port connections (liquid and gas line pipes) until a positive pressure is achieved
5. Evacuate the system to a minimum reading of 500 Microns (0.5 Torr).
6. For a moisture-free system, ensure the vacuum is held without movement for a minimum of 4 hours.
7. If vacuum fails to hold, carry out steps 2 through 6 until vacuum holds.

Table 12. Pressure Test Specifications

1	3 bar	44 psig	Minimum of 10 minutes
2	15 bar	220 psig	Minimum of 10 minutes
3	32 bar	470 psig	Minimum of 10 minutes
4	45 bar	650 psig	1 hour. Stress test to prove the integrity of the complete installation.
5	32 bar	470 psig	24 hours. Lower system pressure test, after confirmation No. 4 was successfully completed.

Wiring Connections

IMPORTANT

Install unit so that unit disconnect is accessible.

Use specified wiring and cable to make electrical connections. Clamp cables securely and make sure that connections are tight to avoid strain on wiring. Insecure wiring connections may result in equipment failure and risk of fire.

Wiring must be installed so that all cover plates can be securely closed.

⚠WARNING

Electric Shock Hazard. Can cause injury or death. Unit must be rounded in accordance with national and local codes.

Line voltage is present at all components when unit is not in operation. Disconnect all remote electric power supplies before opening access panel. Unit may have multiple power sources.

⚠CAUTION

All terminal connections must be made as illustrated in the following diagrams. Improperly connected wiring could damage unit or cause communication errors between indoor and outdoor units.

In the U.S.A., wiring must conform with current local codes and the current National Electric Code (NEC). In Canada, wiring must conform with current local codes and the current Canadian Electrical Code (CEC).

Outdoor Unit

- Refer to unit nameplate for minimum circuit ampacity and maximum over-current protection size.
- Make all electrical power wiring connections at the outdoor unit.
- Be sure to reattach all electrical box covers after connections are complete.

Indoor Units

Refer to the installation instruction included with the indoor unit for further details.

Automatic Wiring and Line Set Correction Function

A “Check Switch” on outdoor unit control reviews zone wiring and piping connections and displays “CE” if all connections are correct. If a unit(s) is not connected to the correct zone the control will automatically remap the wiring to the correct zone based on indoor unit size.

All models now feature automatic correction of wiring and line set installation errors.

How To Activate This Function

1. Check that outside temperature is above 41°F (5°C). This function does not work when the outside temperature is below 41°F (5°C).
2. Check that the service valves of the liquid and gas lines are open.
3. Turn on the breaker and wait at least two minutes.
4. Press and hold the check switch on the outdoor control board for five seconds or until the LED displays “CE” then release the switch. The CE code indicates the function is operating correctly.
5. Approximately 5-10 minutes after the switch is pressed, the “CE” code will disappear. This indicates the wiring/line set error(s) have been corrected and the system is now fully functional.

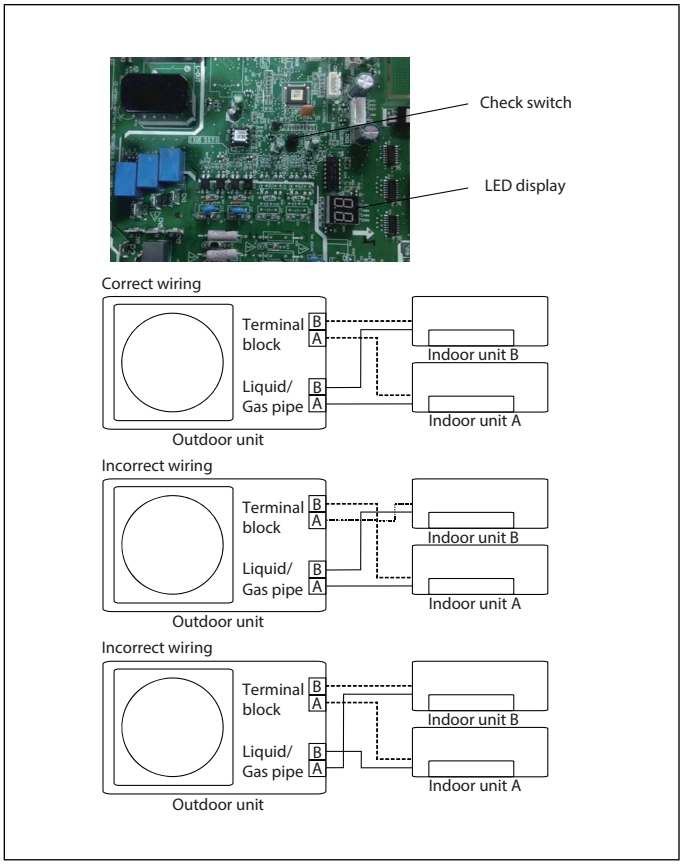


Figure 23. Correct and Incorrect Wiring

IMPORTANT

All diagrams (Figure 27 through Figure 33) are typical wiring diagrams. Refer to the wiring diagram on the unit for actual wiring.

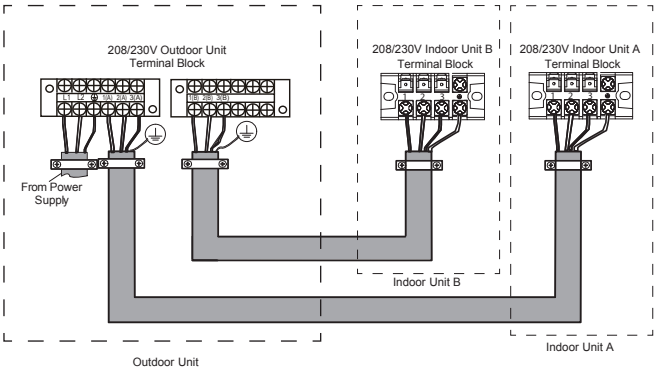


Figure 24. Connection Diagram - Systems 24k and Below

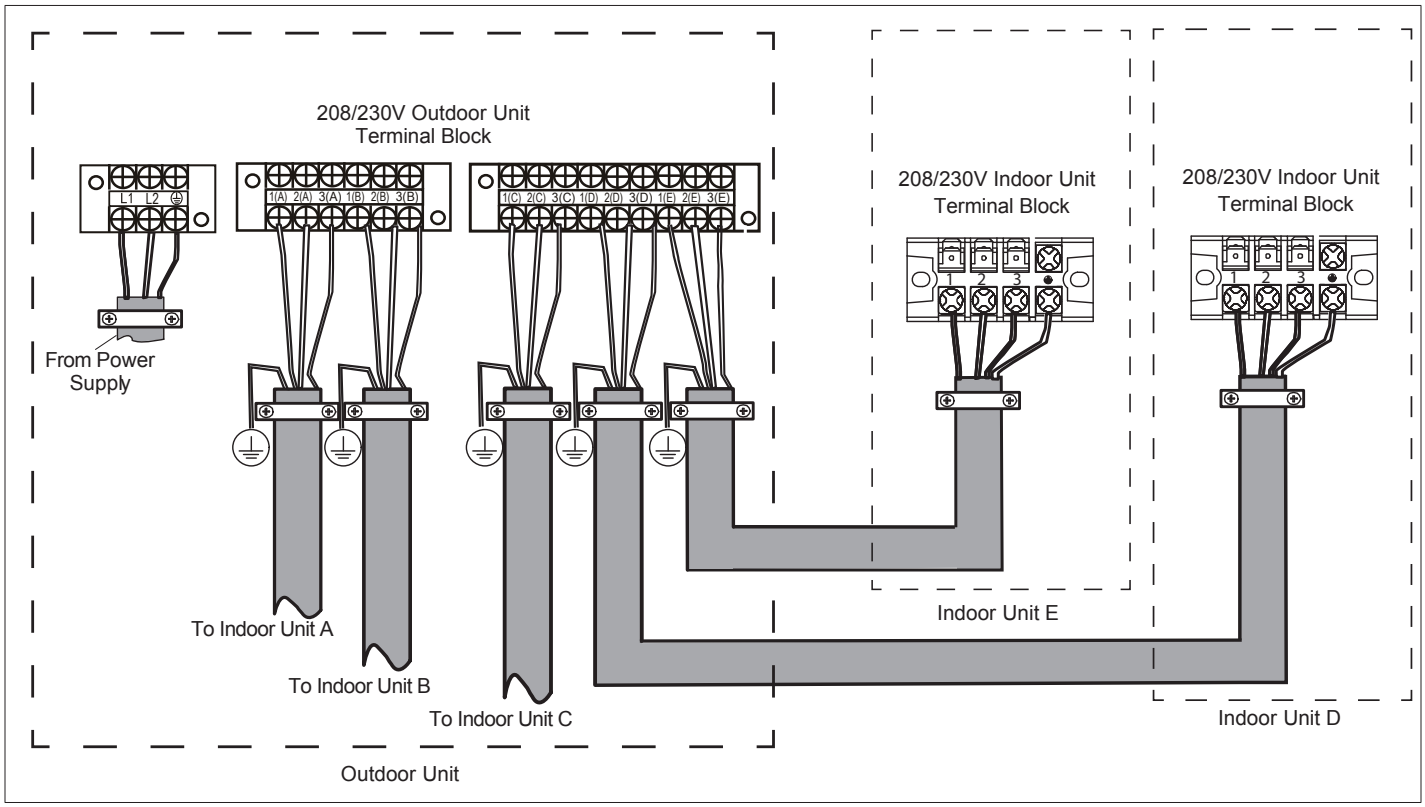
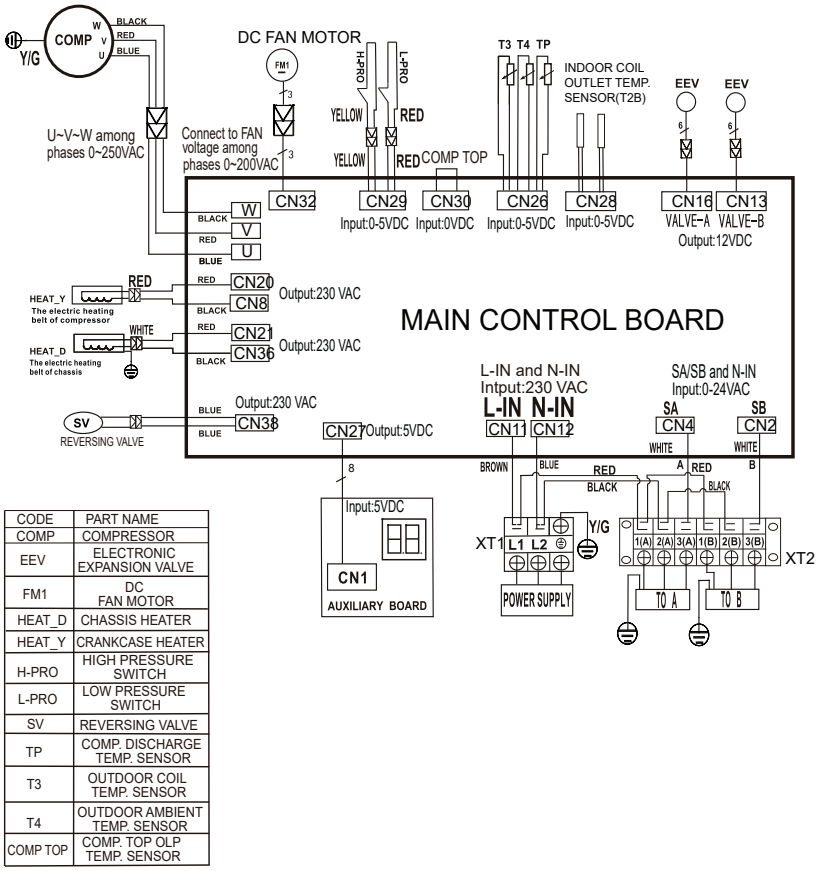


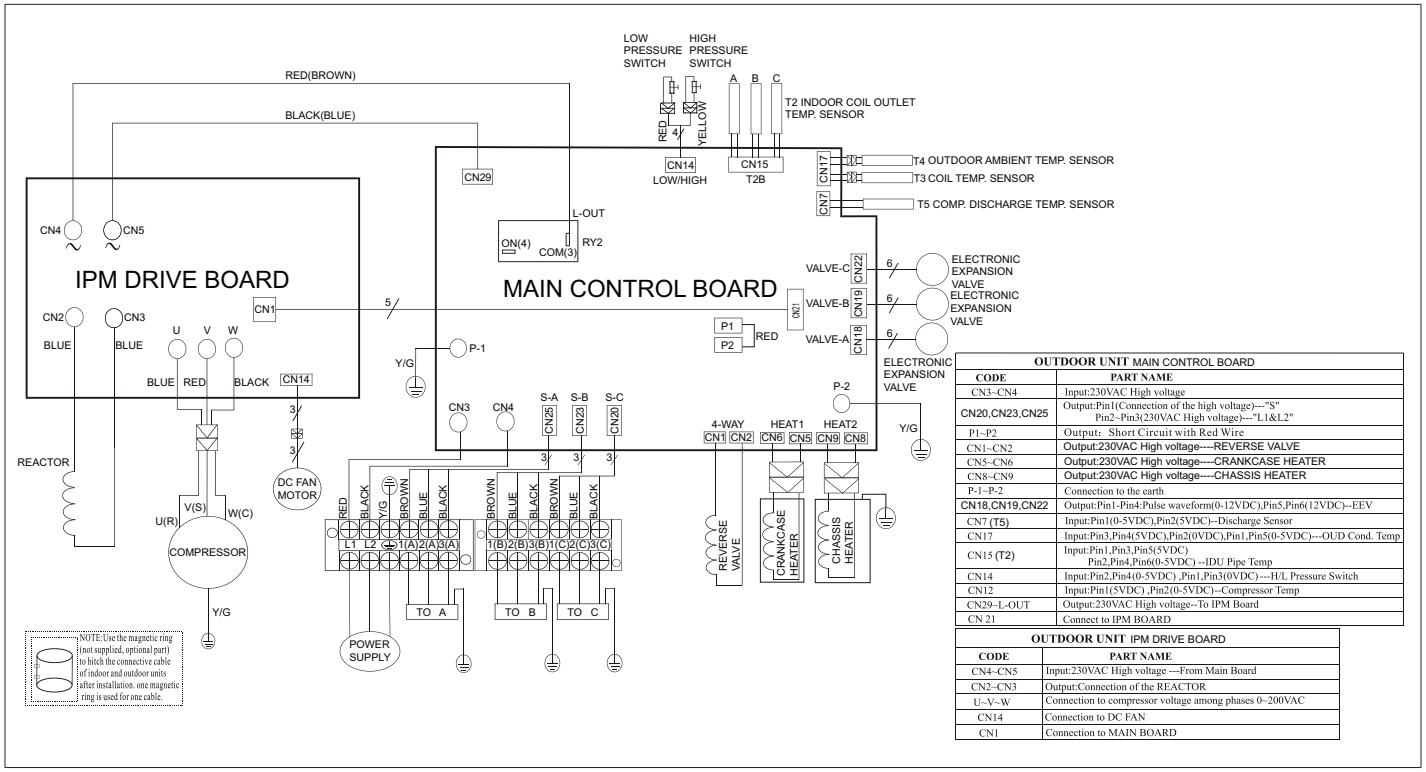
Figure 25. Connection Diagram

Table 13. Multi-Zone Installation Wiring Requirements					
System and Terminal Designations	**System Capacity**	**System Voltage**	**Number of Conductors**	**Wire Type**	**Wire Gauge / MCA**
Indoor to Outdoor Unit					
Indoor to Outdoor Wiring - (Communication/Power) 1, 2, 3 and GND	06K, 09K and 12K	208/230VAC	4	Stranded and unshielded	16AWG
Indoor to Outdoor Wiring - (Communication/Power) 1, 2, 3 and GND	18K	208/230VAC	4	Stranded and unshielded	16AWG
Indoor to Outdoor Wiring - (Communication/Power) 1, 2, 3 and GND	24K	208/230VAC	4	Stranded and unshielded	16AWG
Multi-Zone Outdoor Unit to Main Power					
Outdoor to Main Power - L1, L2 and GND	18K	208/230VAC	3	Stranded and unshielded	14AWG / 18A
Outdoor to Main Power - L1, L2 and GND	24K	208/230VAC	3	Stranded and unshielded	12AWG / 24.5A
Outdoor to Main Power - L1, L2 and GND	30K	208/230VAC	3	Stranded and unshielded	12AWG / 24.5A
Outdoor to Main Power - L1, L2 and GND	36K	208/230VAC	3	Stranded and unshielded	12AWG / 25A
Outdoor to Main Power - L1, L2 and GND	48K	208/230VAC	3	Stranded and unshielded	8AWG / 35A
MCA = Minimum Circuit Amps					



CODE	PART NAME
COMP	COMPRESSOR
EEV	ELECTRONIC EXPANSION VALVE
FM1	DC FAN MOTOR
HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	REVERSING VALVE
TP	COMP. DISCHARGE TEMP. SENSOR
T3	OUTDOOR COIL TEMP. SENSOR
T4	OUTDOOR AMBIENT TEMP. SENSOR
COMP TOP	COMP. TOP OLP TEMP. SENSOR

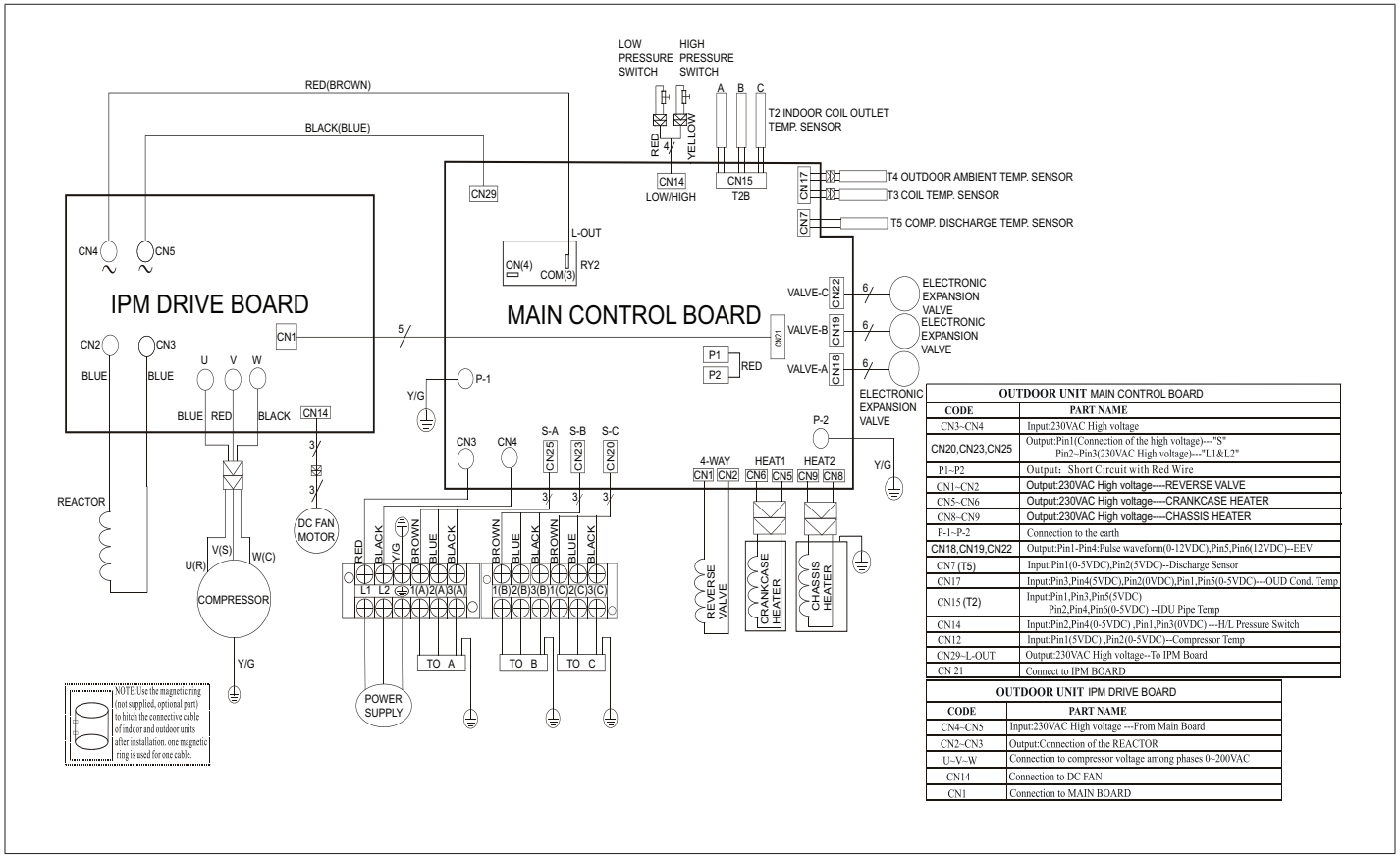
Figure 26. MPC018S4M-*P Outdoor Unit Wiring Diagram



OUTDOOR UNIT MAIN CONTROL BOARD	
CODE	PART NAME
CN3~CN4	Input:230VAC High voltage
CN20,CN23,CN25	Output:Pin1(Connection of the high voltage)---"S" Pin2~Pin3(230VAC High voltage)---"L1&L2"
P1~P2	Output：Short Circuit with Red Wire
CN1~CN2	Output:230VAC High voltage----REVERSE VALVE
CN5~CN6	Output:230VAC High voltage----CRANKCASE HEATER
CN8~CN9	Output:230VAC High voltage----CHASSIS HEATER
P~1~P~2	Connection to the earth
CN18,CN19,CN22	Output:Pin1-Pin4:Pulse waveform(0-12VDC),Pin5,Pin6(12VDC)--EEV
CN7 (T5)	Input:Pin1(0-5VDC),Pin2(5VDC)--Discharge Sensor
CN17	Input:Pin3,Pin4(5VDC),Pin2(0VDC),Pin1,Pin5(0-5VDC)---OUD Cond. Temp
CN15 (T2)	Input:Pin1,Pin3,Pin5(5VDC) Pin2,Pin4,Pin6(0-5VDC) --IDU Pipe Temp
CN14	Input:Pin2,Pin4(0-5VDC) ,Pin1,Pin3(0VDC) ---H/L Pressure Switch
CN12	Input:Pin1(5VDC) ,Pin2(0-5VDC)--Compressor Temp
CN29~L-OUT	Output:230VAC High voltage--To IPM Board
CN 21	Connect to IPM BOARD

OUTDOOR UNIT IPM DRIVE BOARD	
CODE	PART NAME
CN4~CN5	Input:230VAC High voltage ---From Main Board
CN2~CN3	Output:Connection of the REACTOR
U~V~W	Connection to compressor voltage among phases 0~200VAC
CN14	Connection to DC FAN
CN1	Connection to MAIN BOARD

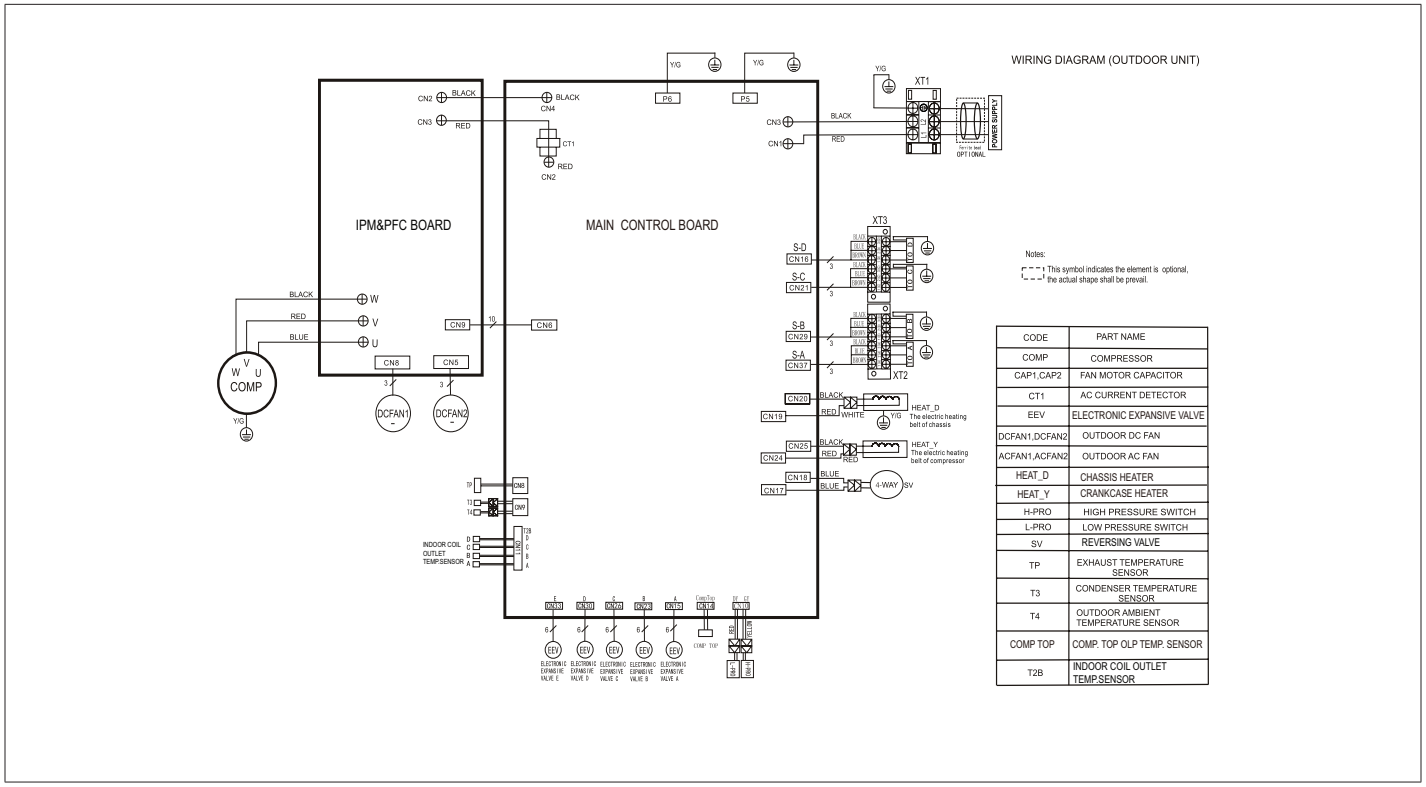
Figure 27. MPC024S4M-*P Outdoor Unit Wiring Diagram



OUTDOOR UNIT MAIN CONTROL BOARD	
CODE	PART NAME
CN3~CN4	Input:230VAC High voltage
CN20,CN23,CN25	Output:Pin1(Connection of the high voltage)---"S" Pin2~Pin3(230VAC High voltage)---"L1&L2"
P1~P2	Output：Short Circuit with Red Wire
CN1~CN2	Output:230VAC High voltage----REVERSE VALVE
CN5~CN6	Output:230VAC High voltage----CRANKCASE HEATER
CN8~CN9	Output:230VAC High voltage----CHASSIS HEATER
P~1~P~2	Connection to the earth
CN18,CN19,CN22	Output:Pin1-Pin4:Pulse waveform(0-12VDC),Pin5,Pin6(12VDC)--EEV
CN7 (T5)	Input:Pin1(0-5VDC),Pin2(5VDC)--Discharge Sensor
CN17	Input:Pin3,Pin4(5VDC),Pin2(0VDC),Pin1,Pin5(0-5VDC)---OUD Cond. Temp
CN15 (T2)	Input:Pin1,Pin3,Pin5(5VDC) Pin2,Pin4,Pin6(0-5VDC) --IDU Pipe Temp
CN14	Input:Pin2,Pin4(0-5VDC) ,Pin1,Pin3(0VDC) ---H/L Pressure Switch
CN12	Input:Pin1(5VDC) ,Pin2(0-5VDC)--Compressor Temp
CN29~L-OUT	Output:230VAC High voltage--To IPM Board
CN 21	Connect to IPM BOARD

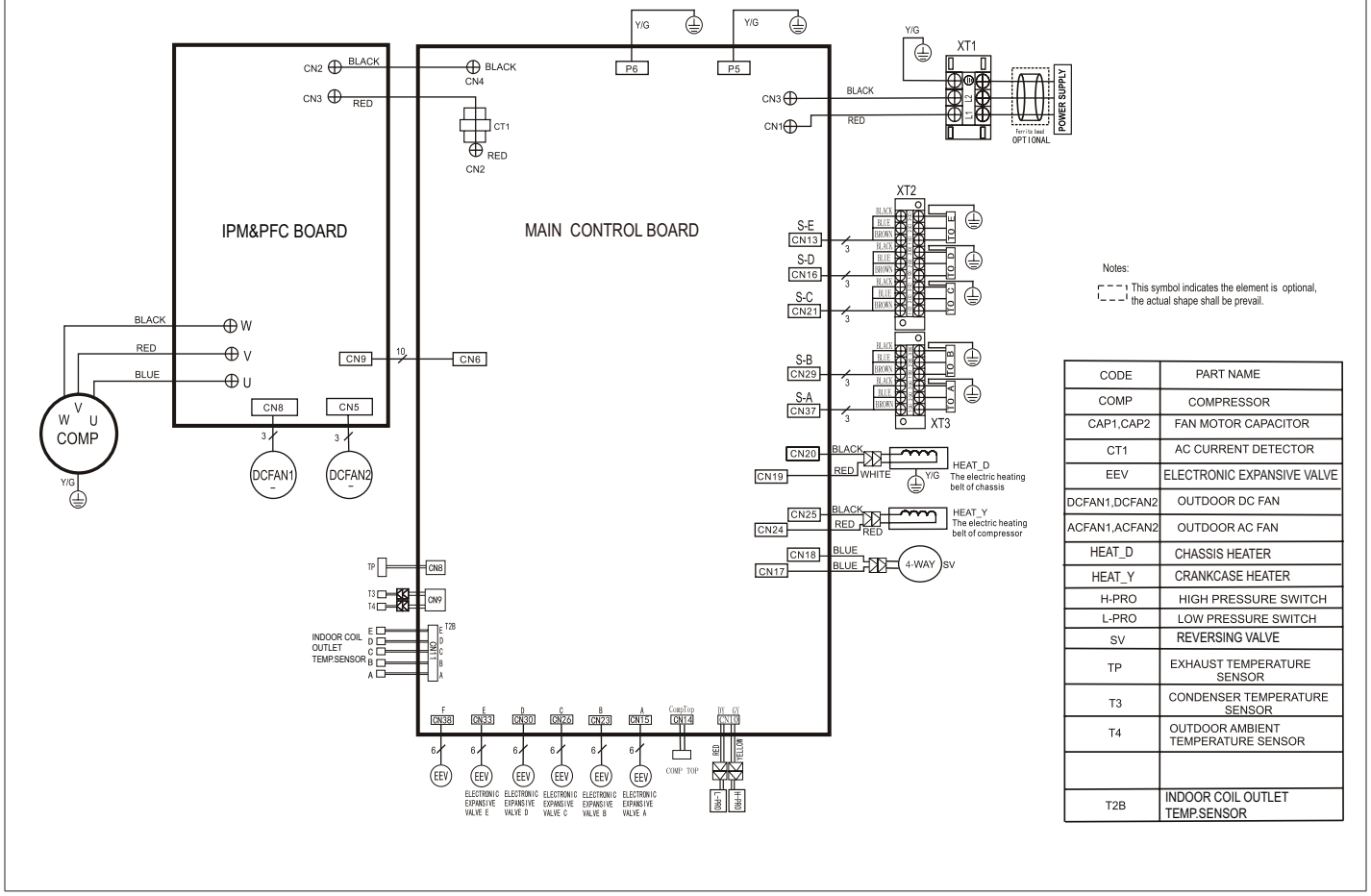
OUTDOOR UNIT IPM DRIVE BOARD	
CODE	PART NAME
CN4~CN5	Input:230VAC High voltage ---From Main Board
CN2~CN3	Output:Connection of the REACTOR
U~V~W	Connection to compressor voltage among phases 0~200VAC
CN14	Connection to DC FAN
CN1	Connection to MAIN BOARD

Figure 28. MPC030S4M-*P Outdoor Unit Wiring Diagram



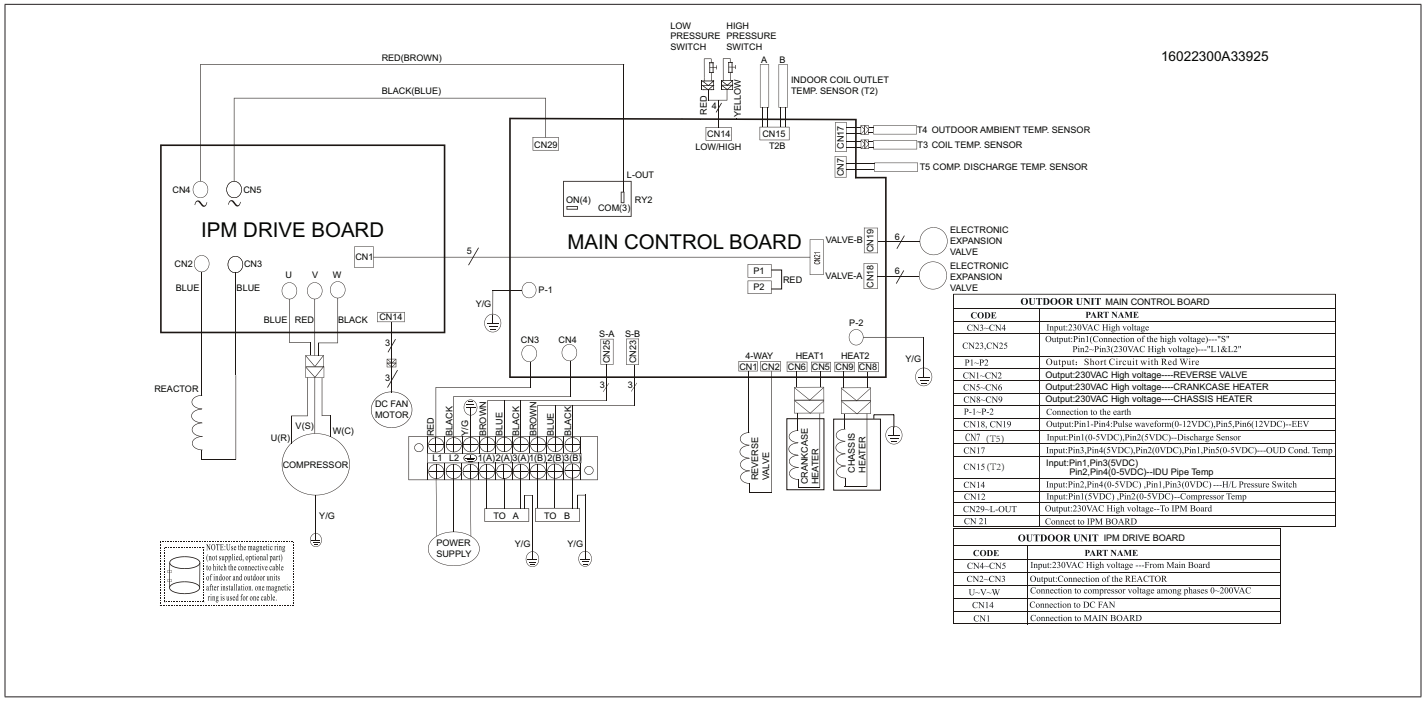
CODE	PART NAME
COMP	COMPRESSOR
CAP1,CAP2	FAN MOTOR CAPACITOR
CT1	AC CURRENT DETECTOR
EEV	ELECTRONIC EXPANSIVE VALVE
DCFAN1,DCFAN2	OUTDOOR DC FAN
ACFAN1,ACFAN2	OUTDOOR AC FAN
HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	REVERSING VALVE
TP	EXHAUST TEMPERATURE SENSOR
T3	CONDENSER TEMPERATURE SENSOR
T4	OUTDOOR AMBIENT TEMPERATURE SENSOR
COMP TOP	COMP. TOP OLP TEMP. SENSOR
T2B	INDOOR COIL OUTLET TEMP.SENSOR

Figure 29. MPC036S4M-*P Outdoor Unit Wiring Diagram



CODE	PART NAME
COMP	COMPRESSOR
CAP1,CAP2	FAN MOTOR CAPACITOR
CT1	AC CURRENT DETECTOR
EEV	ELECTRONIC EXPANSIVE VALVE
DCFAN1,DCFAN2	OUTDOOR DC FAN
ACFAN1,ACFAN2	OUTDOOR AC FAN
HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	REVERSING VALVE
TP	EXHAUST TEMPERATURE SENSOR
T3	CONDENSER TEMPERATURE SENSOR
T4	OUTDOOR AMBIENT TEMPERATURE SENSOR
T2B	INDOOR COIL OUTLET TEMP.SENSOR

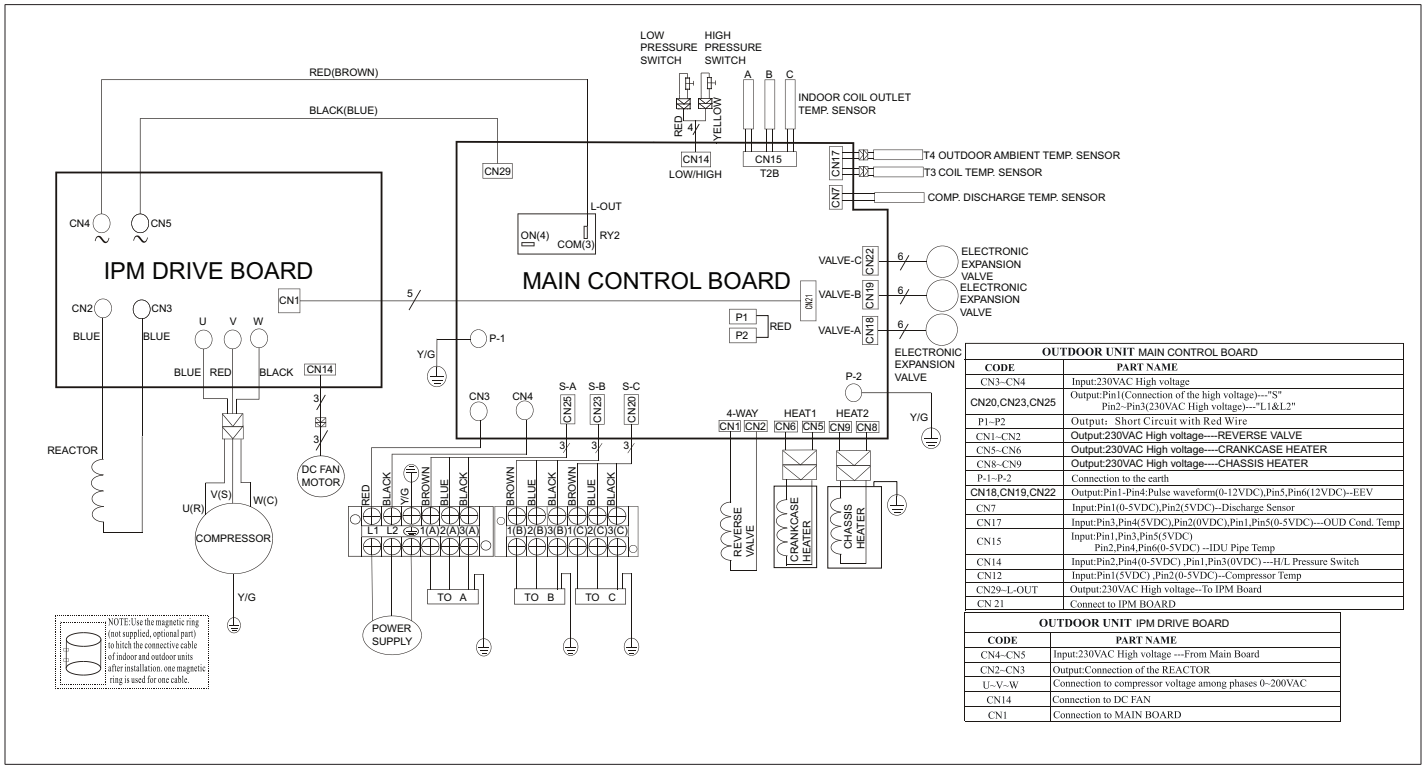
Figure 30. MPC048S4M-*P Outdoor Unit Wiring Diagram



OUTDOOR UNIT MAIN CONTROL BOARD	
CODE	PART NAME
CN3–CN4	Input:230VAC High voltage
CN23,CN25	Output:Pin1(Connection of the high voltage)---"S" Pin2–Pin3(230VAC High voltage)---"L1&L2"
P1–P2	Output：Short Circuit with Red Wire
CN1–CN2	Output:230VAC High voltage----REVERSE VALVE
CN5–CN6	Output:230VAC High voltage----CRANKCASE HEATER
CN8–CN9	Output:230VAC High voltage----CHASSIS HEATER
P-1–P-2	Connection to the earth
CN18, CN19	Output:Pin1-Pin4:Pulse waveform(0-12VDC),Pin5,Pin6(12VDC)--EEV
CN7 (T5)	Input:Pin1(0-5VDC),Pin2(5VDC)--Discharge Sensor
CN17	Input:Pin3,Pin4(5VDC),Pin2(0VDC),Pin1,Pin5(0-5VDC)---OUD Cond. Temp
CN15 (T2)	Input:Pin1,Pin3(5VDC) Pin2,Pin4(0-5VDC)--IDU Pipe Temp
CN14	Input:Pin2,Pin4(0-5VDC) ,Pin1,Pin3(0VDC) ---H/L Pressure Switch
CN12	Input:Pin1(5VDC) ,Pin2(0-5VDC)--Compressor Temp
CN29–L-OUT	Output:230VAC High voltage--To IPM Board
CN 21	Connect to IPM BOARD

OUTDOOR UNIT IPM DRIVE BOARD	
CODE	PART NAME
CN4–CN5	Input:230VAC High voltage ---From Main Board
CN2–CN3	Output:Connection of the REACTOR
U–V–W	Connection to compressor voltage among phases 0–200VAC
CN14	Connection to DC FAN
CN1	Connection to MAIN BOARD

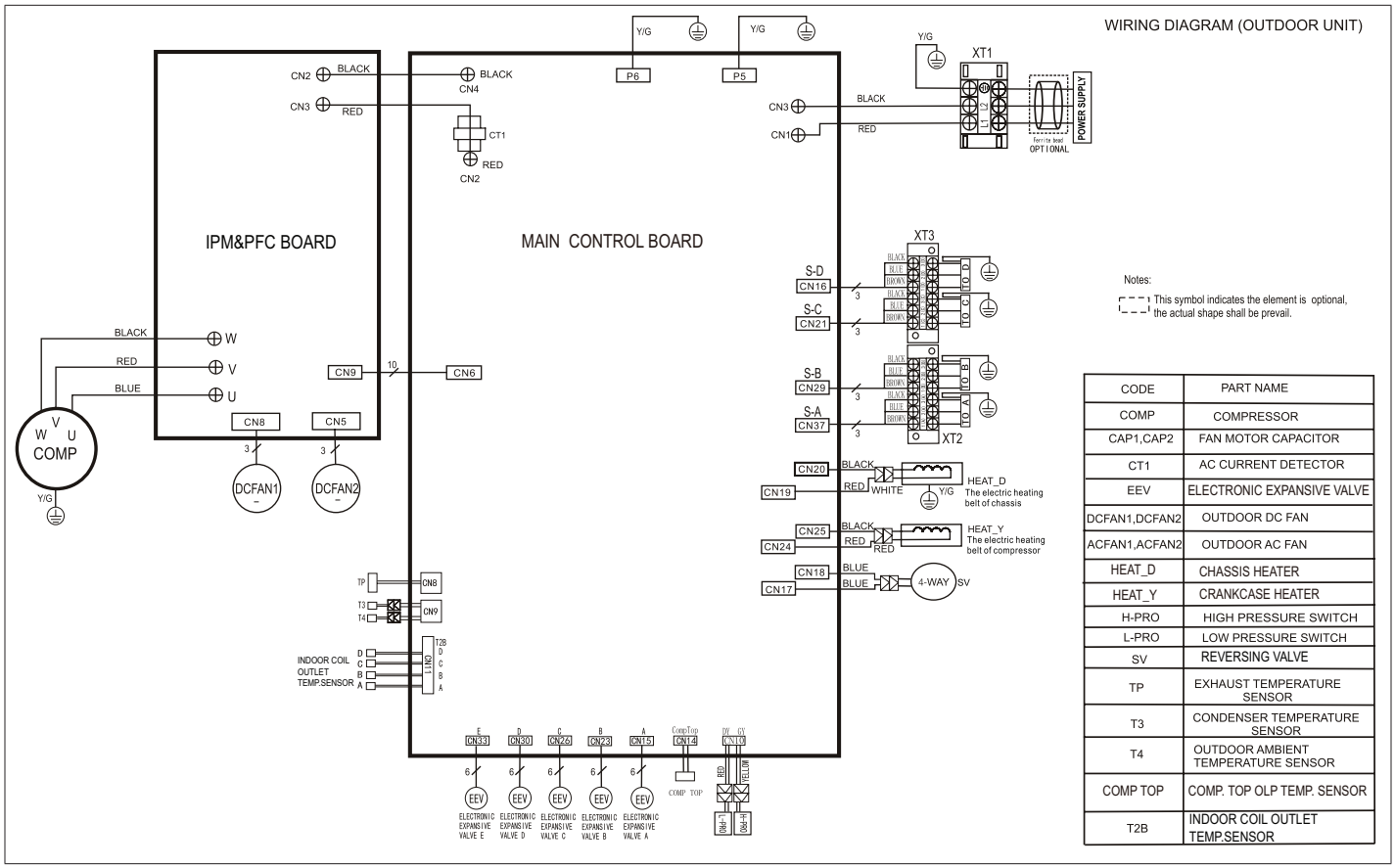
Figure 31. MLB018S4M-*P Outdoor Unit Wiring Diagram



OUTDOOR UNIT MAIN CONTROL BOARD	
CODE	PART NAME
CN3–CN4	Input:230VAC High voltage
CN20,CN23,CN25	Output:Pin1(Connection of the high voltage)---"S" Pin2–Pin3(230VAC High voltage)---"L1&L2"
P1–P2	Output：Short Circuit with Red Wire
CN1–CN2	Output:230VAC High voltage----REVERSE VALVE
CN5–CN6	Output:230VAC High voltage----CRANKCASE HEATER
CN8–CN9	Output:230VAC High voltage----CHASSIS HEATER
P-1–P-2	Connection to the earth
CN18,CN19,CN22	Output:Pin1-Pin4:Pulse waveform(0-12VDC),Pin5,Pin6(12VDC)--EEV
CN7	Input:Pin1(0-5VDC),Pin2(5VDC)--Discharge Sensor
CN17	Input:Pin3,Pin4(5VDC),Pin2(0VDC),Pin1,Pin5(0-5VDC)---OUD Cond. Temp
CN15	Input:Pin1,Pin3,Pin5(5VDC) Pin2,Pin4,Pin6(0-5VDC) --IDU Pipe Temp
CN14	Input:Pin2,Pin4(0-5VDC) ,Pin1,Pin3(0VDC) ---H/L Pressure Switch
CN12	Input:Pin1(5VDC) ,Pin2(0-5VDC)--Compressor Temp
CN29–L-OUT	Output:230VAC High voltage--To IPM Board
CN 21	Connect to IPM BOARD

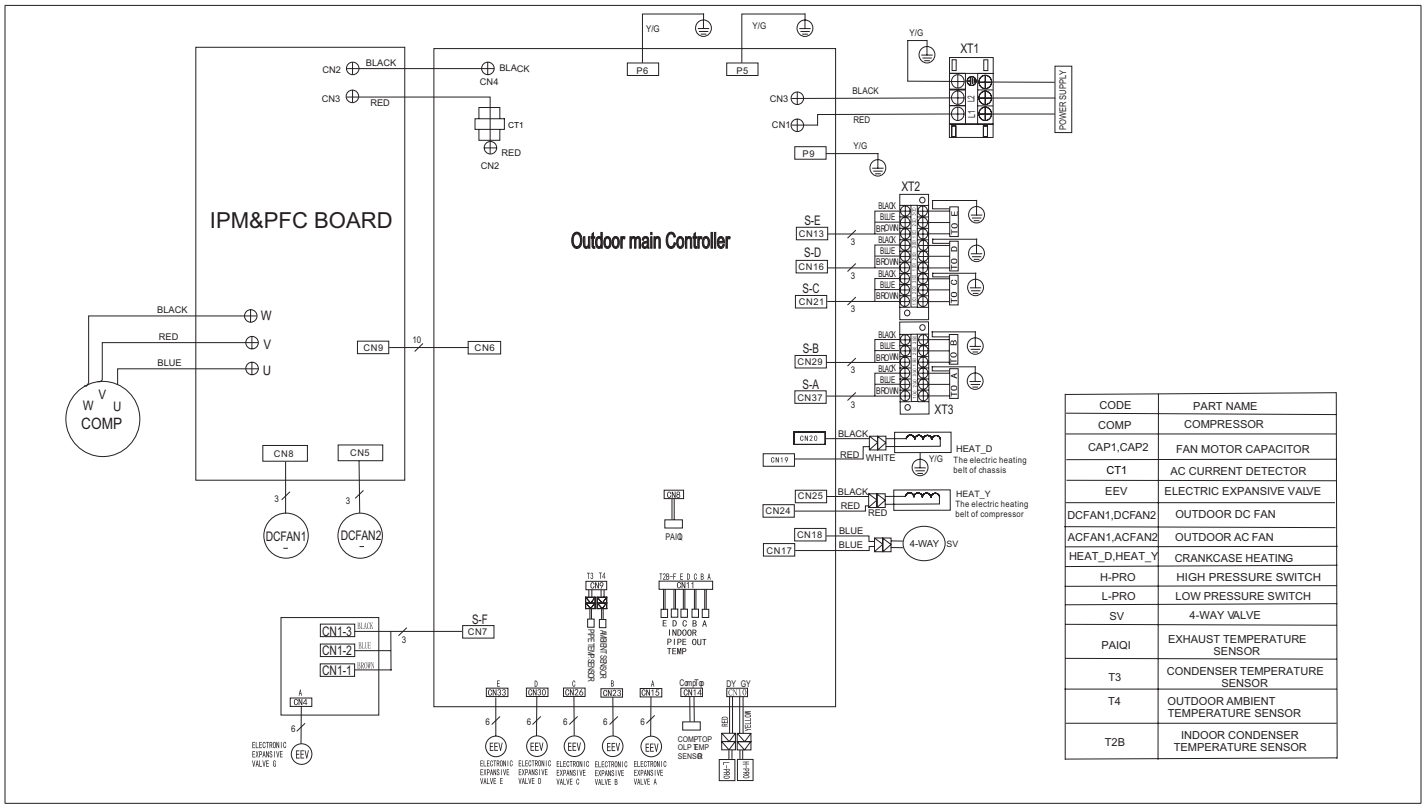
OUTDOOR UNIT IPM DRIVE BOARD	
CODE	PART NAME
CN4–CN5	Input:230VAC High voltage ---From Main Board
CN2–CN3	Output:Connection of the REACTOR
U–V–W	Connection to compressor voltage among phases 0–200VAC
CN14	Connection to DC FAN
CN1	Connection to MAIN BOARD

Figure 32. MLB030S4M-*P Outdoor Unit Wiring Diagram



CODE	PART NAME
COMP	COMPRESSOR
CAP1,CAP2	FAN MOTOR CAPACITOR
CT1	AC CURRENT DETECTOR
EEV	ELECTRONIC EXPANSIVE VALVE
DCFAN1,DCFAN2	OUTDOOR DC FAN
ACFAN1,ACFAN2	OUTDOOR AC FAN
HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	REVERSING VALVE
TP	EXHAUST TEMPERATURE SENSOR
T3	CONDENSER TEMPERATURE SENSOR
T4	OUTDOOR AMBIENT TEMPERATURE SENSOR
COMP TOP	COMP. TOP OLP TEMP. SENSOR
T2B	INDOOR COIL OUTLET TEMP.SENSOR

Figure 33. MLB036S4M-*P Outdoor Unit Wiring Diagram



CODE	PART NAME
COMP	COMPRESSOR
CAP1,CAP2	FAN MOTOR CAPACITOR
CT1	AC CURRENT DETECTOR
EEV	ELECTRIC EXPANSIVE VALVE
DCFAN1,DCFAN2	OUTDOOR DC FAN
ACFAN1,ACFAN2	OUTDOOR AC FAN
HEAT_D,HEAT_Y	CRANKCASE HEATING
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	4-WAY VALVE
PAIQI	EXHAUST TEMPERATURE SENSOR
T3	CONDENSER TEMPERATURE SENSOR
T4	OUTDOOR AMBIENT TEMPERATURE SENSOR
T2B	INDOOR CONDENSER TEMPERATURE SENSOR

Figure 34. MLB048S4M-*P Outdoor Unit Wiring Diagram

Unit Start-Up

IMPORTANT

Units should be energized 24 hours before unit start-up to prevent compressor damage as a result of slugging.

1. Inspect all factory-installed and field-installed wiring for loose connections.
2. Verify that the manifold gauge set is connected.
3. Add additional refrigerant charge if required before opening valves and while system is still under a vacuum.
4. Open the liquid and gas line master valves and each individual port's service valve to release the refrigerant charge contained in outdoor unit into the system.
5. Replace the stem caps and tighten to the value listed in "Table 7. Torque Requirements" on page 20.
6. Check voltage supply at the outdoor unit terminal strip. The voltage must be within the range listed on the unit's nameplate. If not, do not start the equipment until you have consulted with the power company and the voltage condition has been corrected.
7. Refer to the included user guide to operate the system using the provided remote control.
8. Visually check for binding of both indoor and outdoor fans.

Refrigerant Charge

The outdoor unit is factory-charged with refrigerant. Calculate the additional refrigerant required according to the length of the liquid pipe (one way) between the outdoor unit and indoor unit connections.

Be sure to add the proper amount of additional refrigerant. Failure to do so may result in reduced performance.

Table 14. Refrigerant Charge

System	Pre-charge Pipe Length	Amount of Refrigerant to add
Two-port	50 ft. (15 m)	0.16 oz ((L1 ft + L2 ft) - 50 ft) 0.005 kg ((L1 m + L2 m) - 15 m)
Three-port	75 ft. (23 m)	0.16 oz ((L1 ft + L2 ft + L3 ft) - 75 ft) 0.005 kg ((L1 m + L2 m + L3 m) - 23 m)
Four-port	100 ft. (30 m)	0.16 oz ((L1 ft + L2 ft + L3 ft + L4 ft) - 100 ft) 0.005 kg ((L1 m + L2 m + L3 m + L4 m) - 30 m)
Five-port	125 ft. (38 m)	0.16 oz ((L1 ft + L2 ft + L3 ft + L4 ft + L5 ft) - 125 ft) 0.005 kg ((L1 m + L2 m + L3 m + L4 m + L5 m) - 38 m)

Multi-Zone Outdoor Unit Error Codes

The error code display is located on the main controller board of all multi-zone outdoor units.

Table 15. MLB and MPC Multi-Zone Outdoor Unit Error Codes

Display	Malfunction and Protection Indication
EL01	Communication malfunction between indoor and outdoor units.
FL14	Capability mismatch between indoor unit and outdoor unit
EC50	Outdoor temperature sensor error.
EC51	Outdoor EEPROM error.
EC52	Condenser coil temperature sensor (T3) malfunction.
EC53	Outdoor ambient temperature sensor (T4) malfunction.
EC54	Compressor discharge temperature sensor TP is in open circuit or has short circuited
EC55	Outdoor IPM module temperature sensor malfunction
EC56	Outdoor T2B sensor error.
EC57	Refrigerant pipe temperature sensor error.
EC07	Outdoor DC fan motor malfunction/fan speed out of control.
EC71	Over current failure of outdoor DC fan motor.
EC72	Lack phase failure of outdoor DC fan motor.
PC00	Inverter module (IPM) protection.
PC02	Top temperature protection of compressor.
PC06	Discharge temperature protection of compressor.
PC08	Outdoor over-current protection.
PC0A	High temperature protection of condenser.
PC0F	PFC module protection.
PC0L	Low temperature protection of outdoor unit.
PC10	Outdoor unit low AC voltage protection.
PC11	Outdoor unit main control board DC bus high voltage protection.

Table 15. MLB and MPC Multi-Zone Outdoor Unit Error Codes

Display	Malfunction and Protection Indication
PC12	Outdoor unit main control board DC bus high voltage protection / 341 Machine Check Error (MCE) error.
PC30	System high pressure protection
PC31	System low pressure protection
PC40	Communication error between outdoor main chip and compressor driven chip
PC42	Compressor start failure of outdoor unit
PC43	Outdoor compressor lack phase protection
PC44	Outdoor unit zero speed protection
PC45	Outdoor unit IR chip drive failure
PC46	Compressor speed has been out of control
PC49	Compressor over-current failure
PCA1	Condensation protection of refrigerant pipe
PH90	High temperature protection of Evaporator
PH91	Low temperature protection of Evaporator
LC06	High temperature protection of Inverter module (IPM)