

Application Note : 0001

Allowable configurations of MVZ air handling units with MXZ multi-zone outdoor units

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Introduction

This application note defines the maximum number of MVZ multi-position air handling units that can be connected to the various MXZ multi-zone outdoor units in standard configuration and with the use of the separate power terminal block (SPTB1).

This document is a supplement to the MVZ and MXZ installation & service manuals as well as the SPTB1 data sheet and manual. For additional details please consult these manuals.

MVZ indoor unit connection to MXZ: standard configuration (without and with SPTB1)

The following table displays the maximum number of MVZ units and additional indoor units that may be connected to the various models of the MXZ multi-zone outdoor units. The table summarizes the limitations without use of SPTB1 and with use of SPTB1 to power the MVZ.

Table 1: MXZ and MVZ standard configuration combination rules

		Connection method	One MVZ	Two MVZ	More than two MVZ With SPTB1	Additional M/S-series indoor unit	Additional P-series indoor unit	Total allowed capacity of outdoor unit (%)
MXZ-C Standard	MXZ-3C24NA/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-3C30NA/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-4C36NA/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-5C42NA/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-8C48NA	Branch box	✓ ⁴	✓	✓	✓ ²	✓ ²	25 – 130
MXZ-C Hyper heat	MXZ-2C20NAHZ/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-3C24NAHZ/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-3C30NAHZ/2	Port	✓ ¹	-	-	✓	-	100 ³
	MXZ-4C36NAHZ	Branch box	✓ ⁴	✓	✓	✓ ²	✓ ²	33 – 130
	MXZ-5C42NAHZ	Branch box	✓ ⁴	✓	✓	✓ ²	✓ ²	29 – 130
	MXZ-8C48NAHZ	Branch box	✓ ⁴	✓	✓	✓ ²	✓ ²	25 - 130

¹ MVZ 1:1 connection is not allowed.

² Additional indoor units cannot be connected when there are two MVZ indoor units connected.

³ The minimum installed capacity cannot be less than 12,000 Btu/h.

⁴ MVZ single connection is possible; however, it is NOT AHRI listed nor tested.

Summary

MXZ-3C24NA/2, 3C30NA/2, 4C36NA/2, 5C42NA/2. 2C20NAHZ/2, 3C24NAHZ/2, 3C30NAHZ/2:

- Only one MVZ indoor unit may be connected.
- When the MVZ indoor unit is connected, the total capacity must not exceed 100%.
- When the MVZ indoor unit is connected, a P-series indoor unit may not be connected.
- Single MVZ connection is **not** allowed for above models (1 to 1).

MXZ-8C48NA, 4C36NAHZ, 5C42NAHZ, 8C48NAHZ:

- Without the use of SPTB1, maximum of two MVZ indoor units may be connected.
- When two MVZ indoor units are connected, no other type of indoor unit may be connected.
- When one MVZ indoor unit is connected, the total capacity must not exceed 130%.
- With the use of SPTB1, More than two MVZ indoor units may be connected but the total capacity must not exceed 130%.

MVZ indoor unit are not supported with any MXZ-B series multi-zone outdoor units.

MVZ indoor unit connection to MXZ: using the separate power terminal block (with SPTB1)

Summary

MXZ-3C24NA/2, 3C30NA/2, 4C36NA/2, 5C42NA/2. 2C20NAHZ/2, 3C24NAHZ/2, 3C30NAHZ/2:

- With use of SPTB1, Standard limitations apply.
- The SPTB1 provides power for the MVZ from an attached electric heat kit.

MXZ-8C48NA, 4C36NAHZ, 5C42NAHZ, 8C48NAHZ:

- With SPTB1, the number of MVZ units connected is limited to the total connected capacity of 130% of the outdoor unit's nominal capacity.

NOTE: When using the SPTB1, first turn on power to Auxiliary Heat module and MVZ/SPTB1, then the branch box and then the outdoor unit, within 5 minutes. (This will avoid possibility of a communication error).

Separate power terminal block (SPTB1)

The SPTB1 provides separate power to the MVZ indoor units (S1 and S2) from auxiliary heat power and communications from outdoor units (S2 and S3) . The benefits are:

- Additional indoor units may be connected to specific outdoor units (see limitations/rules).
- Electric heat operation may remain functional when power to outdoor unit is interrupted or in error.

NOTE: S2 & S3 for communication must still be connected from the outdoor unit to the indoor unit. Refer to the installation manual and submittal document of SPTB1 for more information.