

ENCLOSURE, NEMA 7, EXPLOSION PROOF

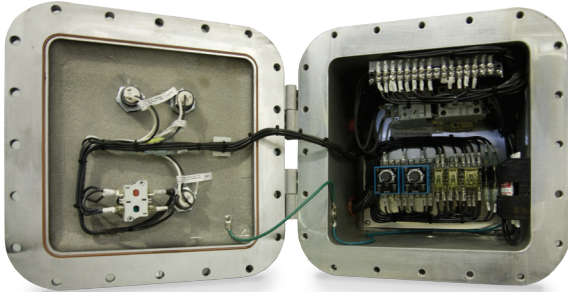


Figure 1. Internal components of a standard small NEMA 7 enclosure. Note the neatly loomed wire for easy identification of components and setting adjustment.



Figure 2. Outer components of a fairly standard small NEMA 7 control panel. Alarm lights are available as an additional option.

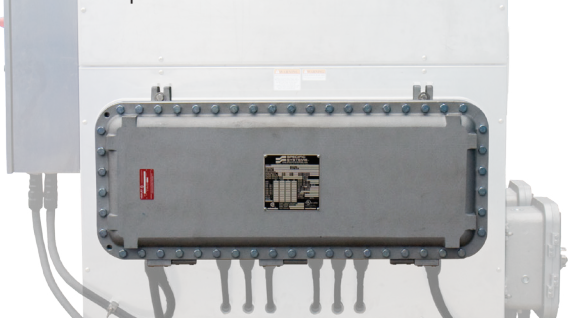


Figure 3. Large NEMA 7 junction box. Note the use of a NEMA 4 panel on the left, and additional NEMA 7 enclosures on the right. These are used to separate different components for safety and ease of service.



AVAILABLE ALTERNATIVES

- NEMA 4 enclosure
- NEMA 4X enclosure (Stainless Steel)
- Additional junction boxes to isolate multiple voltages
- NEMA 7 inside NEMA 4/4X enclosure

PRODUCT APPLICATION

Specific Systems makes available NEMA 7 compliant control panels, junction, and housings for applications in hazardous (classified) environments. NEMA 7 enclosures can be integrated into Specific Systems HVAC and Pressurization units for use in hazardous locations classified as Class I, Division/Zone 1 or 2, Groups B, C, or D as defined in NFPA 70.

NEMA 7 enclosures work as a containment for any spark or arcing that could occur between electrical connections. The enclosures quarantine the electronics, thereby separating the potentially hazardous air outside from any spark that may occur, and removing the risk of explosion or fire.

In an area being declassified by an HVAC/Purge & Pressurization unit, the electronic equipment in the protected area is required to be in a NEMA 4 enclosure. This is usually the case. However, when the unit goes into purge mode, anything in a NEMA 4 enclosure must be depowered, while electronics enclosed in a NEMA 7 are permitted to stay active.

Multiple junction boxes are also available as an additional option. For example, 24V is used in Specific Systems' control panels, while a higher voltage (230, 480, 575, etc.) is used to actually run the equipment. Separating these boxes allows for a higher level of safety for technicians, going beyond applicable requirements.

PRODUCT DESCRIPTION

NEMA 7 panels installed on Specific Systems units are manufactured from corrosion resistant, light weight, copper-free aluminum. The external sealing flange allows for easier access to electrical components, and the integrated mounting slots are cast on for safety.

In applications where a NEMA 7 enclosure is required, all electrical connections must be made inside the enclosure in order to meet specifications under NFPA articles 497 and 500. Enclosures are constructed to meet and exceed these requirements. External flanges on all NEMA 7 enclosures allows easy and maximum access to electronic components.

Because each Specific Systems HVAC unit is individually designed, the enclosures are sized directly to the number and type of options on the unit.

ADDITIONAL OPTIONS FOR DIVISION I LOCATIONS

- Chemical filtration
- Type X, Y, or Z purge & pressurization
- 25' fresh air stack package
- Purge alarms, audible or visual
- Hazardous / explosive gas sensors and alarms
- Individual entire unit field certification, UL, CSA