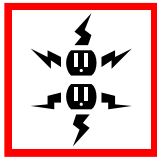


VIT Enclosure Installation Guide

The VIT Enclosure holds one or two VIT boards, and is powered by external line voltage (120 to 240 VAC). You can mount it inside or outside.

The VIT communicates with the System2 Fuel Site Controller (FSC) via twisted pair RS-485 wires. Each VIT board communicates with up to eight fuel nozzles. You can attach up to four VITs to the FSC.

Warning



High voltages exist inside this enclosure! Refer servicing and installation to trained personnel.

DO NOT drill holes in the enclosure! It violates cabinet integrity, voids your warranty, and can leave metallic dust to interfere with system circuitry.

The cabinet has threaded holes for mounting, and knockouts for connecting conduits.

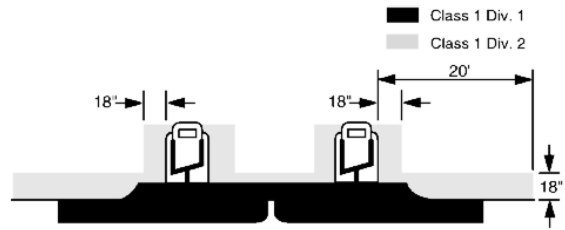
Codes

Installations must be in accordance with the National Electrical Code (NFPA No. 70) and the Automotive and Marine Service Station Code (NFPA No. 30A). Installers are responsible for investigating and following any applicable local codes.

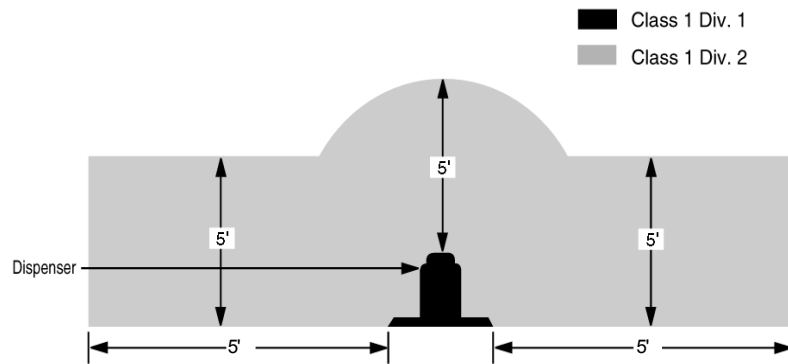
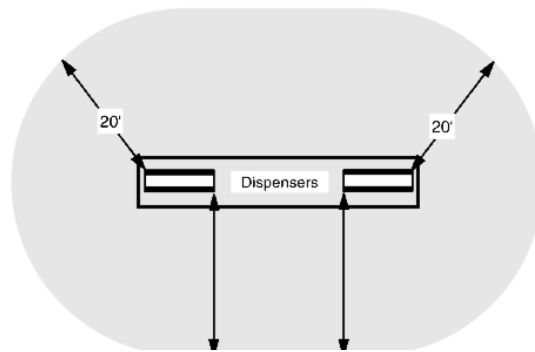
Warning



Do not mount this enclosure within a hazardous area. The area around a fuel dispenser is a hazardous area as defined by the National Electrical Code. See *Figure 1* on the following page for what constitutes a “hazardous area.”



Hazardous Area for Gasoline and Diesel Dispensers



Hazardous Area for CNG Dispensers

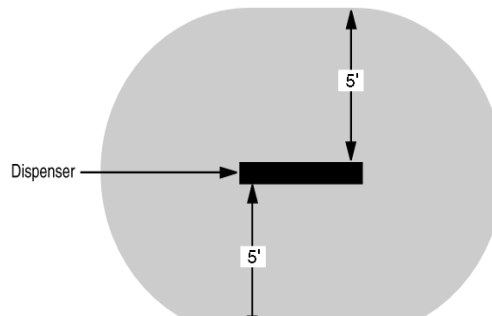


Figure 1: Hazardous Areas for Gasoline/Diesel and CNG Dispensers

Specifications

Power requirements	120/240 VAC, 50/60 Hz, 200 Watts
Dimensions	10"H x 12-3/16"W x 5-11/16"D 10-3/4"H x 10"W Mounting Centers
Ambient Temperature	-40°F to +158°F (-40°C to +70°C)

Installation

The VIT enclosure has no POWER switch -- install one near the enclosure. Be sure the VIT and the FSC are powered from the same circuit breaker.

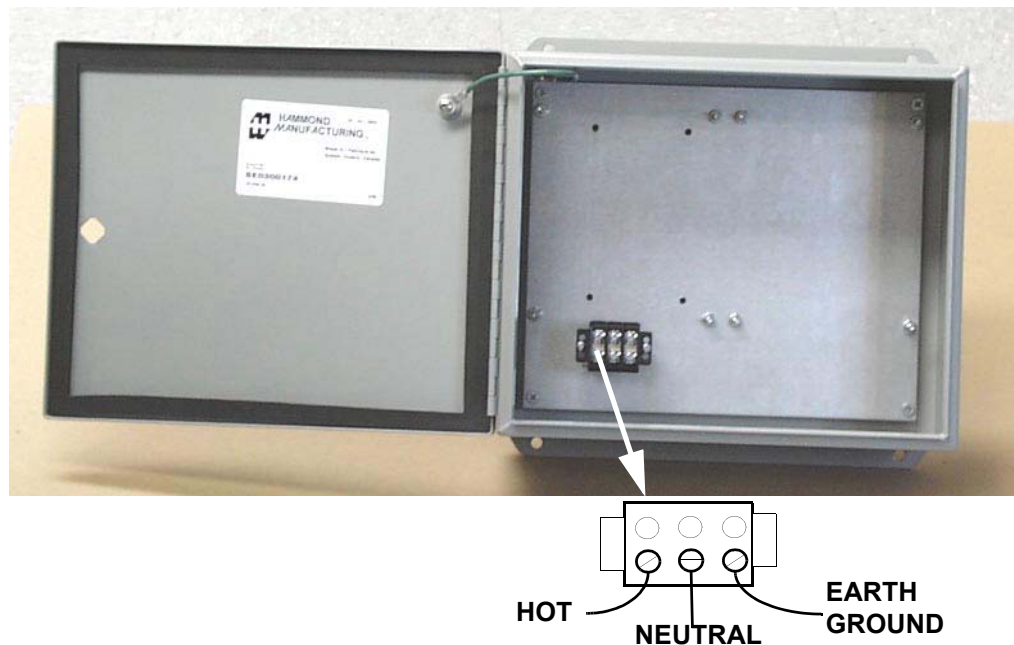


Figure 2: Power Wiring Connections

Physical Installation & Power Wiring

See **Figure 4** on page 5 for an overall system wiring diagram.

1. Choose a suitable location, then attach the enclosure to a wall or optional pedestal using the four mounting holes in the enclosure.
2. Use solid steel conduit for all external connections to the box. There are several $\frac{3}{4}$ inch conduit entry points in the bottom of the box (use adaptors for $\frac{1}{2}$ -inch conduit).
3. Run solid-steel conduit from the enclosure to all external wiring connection points (pumps, breakers, etc).

4. Run power wiring to the enclosure in its own conduit -- the RS-485 communication wiring (the twisted-pair) can share the power conduit provided it has the same insulation rating as the power wires.
5. Pull three lengths of 14 AWG wiring through the conduit.
6. Connect the power wiring to the terminal block as shown in *Figure 2*.

Petro-Net Wiring

Petro-Net uses standard RS-485 protocol for all of a sites inter-component communication. Petro-Net is twisted-pair wiring available from OPW Fuel Management Systems as part number **12-1029**.

You can make twisted-pair by simply twisting together 18 AWG TFFN, THHN or THWN wire. Put about 10 twists per foot (30 cm) into the pair. Pull the twisted-pair through the conduits to link all components of your fueling system together.

Note

The maximum combined length of Petro-Net is 5,000 feet. This is for ALL cable runs at a site.

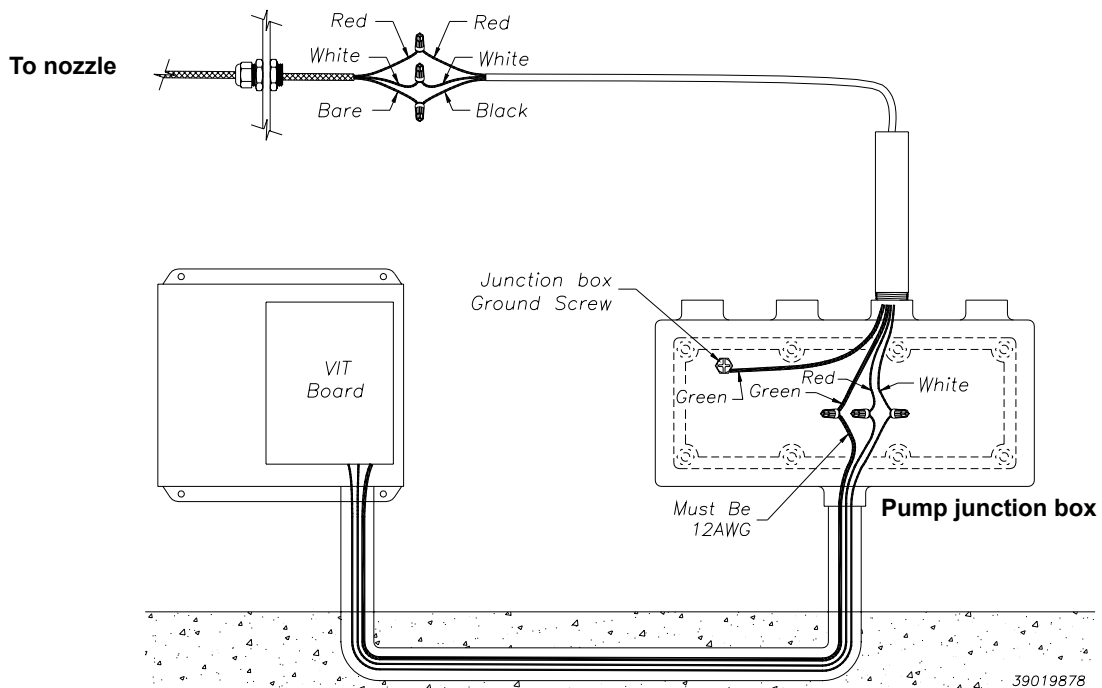


Figure 3: VIT-to-Nozzle Connections

VIT Nozzle Wiring

See Figure 3 on page 4. Each nozzle requires three conductors from the intrinsic safety barrier. You must use oil and gasoline resistant teflon wire, TFFN, THHN or THWN style as follows:

- Two conductors in a shielded cable (for signal). Order part number 12-1025 from OPW Fuel Management Systems.
- One 12 AWG conductor (for ground)

Note

Maximum length from nozzle to VIT is 1,000 feet.

Please see the *FleetLINK Nozzle Kit Installation Instructions* (manual number M00-047.30) for more on the intrinsic barrier and nozzle wiring.

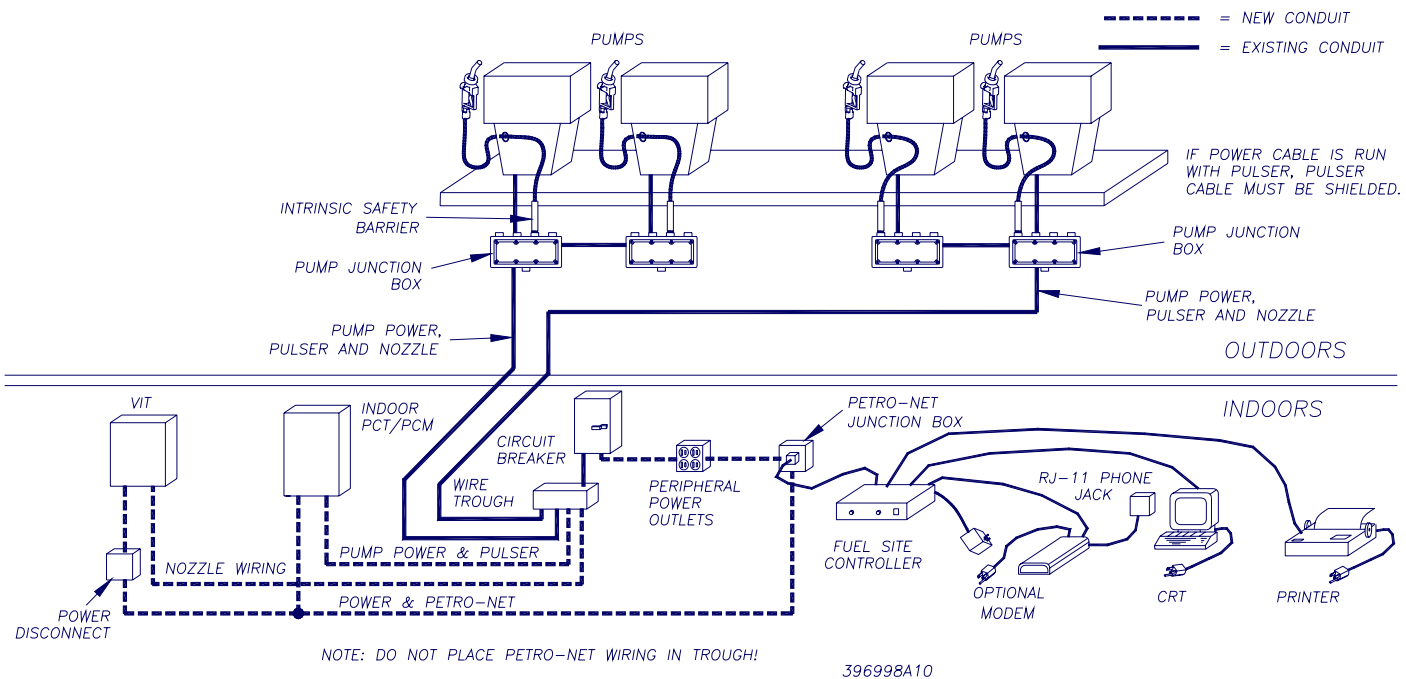


Figure 4: Overall System Connections



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