SafeSite Fuel Oil Control and Power Distribution

The SafeSite Fuel Oil Control (FOC) & Power Distribution System is Designed for Emergency Power and Boiler Applications.

The SafeSite FOC System starts as a power distribution panel and then intelligently integrates fuel system monitoring and pump control functions into one simple automated package. The FOC package includes the controller, day tanks, pumps, and valves. The standard system will service one main tank with duplex pumps and two day/belly tanks with return.

Pre-engineered Solution
The FOC & Power Distribution System is a pre-engineered product that integrates power distribution, fuel transfer, tank monitoring and fuel polishing.

Simplified Installation
The FOC is delivered with your fuel tank and includes a site schematic drawing showing conduit layout and specific point-to-point wiring diagrams for each component. This simplifies the installation process and minimizes site expenses.
The FOC package shall include the controller, day tanks, pumps, and valves as included below. Pipe and valves as shown in the drawings and not specifically listed below shall be included in the installing contractor’s bid to provide a complete and operational system. The system in its entirety shall be provided by Core Engineered Solutions, Inc. 518-635-4343 (NY) or 800-628-5502 (Headquarters). The Safesite™ FOC System shall integrate the following functions into one system:

A. Control Panel Specifications:
2. Enclosure: NEMA 4X (suitable for outdoor and high corrosion areas).
3. Listings: UL508A listed & meets NEC (NFPA70) & NFPA 30 & 37 requirements. Suitable for class 2, division 2, Groups B, C, D.
4. Display: 6-inch Micro-Graphic Touch Panel with TFT color LCD, 320 x 240 dot, 32k color display with LED backlight.
5. PLC: Micro Analog PLC with Relay Ladder Logic Programming, Real Time Clock / Calendar and battery-backed memory
6. Twist to Release Red 60 mm Mushroom-Style Emergency Stop Button with 90 mm Identification Legend
7. Hand-Off-Auto Switch with Tank Selection

B. Outputs to Building Management System (BMS):
1. System Summary Alarm (1) Dry
2. System Summary Warning (1) Dry
3. Auto Dialer for System Alarms and Warnings (optional)
4. Analog Outputs: 2 channels 4-20 mA or 0-5 VDC
5. Modbus RTU Communications Port (configurable up to 115.2k baud)

C. Main Storage Tank Monitoring (for 1 Main Storage Tank) Including:
1. Level Probe
2. Leak Sensor
4. Product Level in Inches.
5. Product Level in Percent of Full Tank Capacity.
6. High Level Alarm Status.
7. High Level Warning Status.
8. Low Level Warning Status.
10. Interstitial (Double Wall) Leak Sensor Status.
11. Present / Historical Alarm Conditions.
12. Fill Station Annunciation and Display (optional). See Drawings.

D. The Day / Belly Tank Level Monitoring Including:
1. Level Probe
2. Interstitial (Secondary Containment) Stainless Steel Leak Sensor
4. Product Level in Inches.
5. Product Level in Percent of Full Tank Capacity.
6. High Level Alarm Status.
7. High Level Warning Status.
8. Low Level Warning Status.
10. Interstitial (Double Wall) Leak Sensor Status.
11. Present/Historical Alarm Conditions

E. Fuel Oil Supply (FOS) Pump Controls Including:
1. Motor Starters (up to 2) with Overload Protection:
2. Pump Run Status
3. Monitors Motor Starters and Overload Protection
4. Controls Pumps up to 1.5 HP, Single Phase (3 Phase is Available)
5. Programmable Start/Stop & Alarm Levels. Standard Levels are Set at _% for High Level; _% Pump On; _% Pump Off; _% Low Level
6. Sump Leak Sensor (optional)

F. Fuel Oil Return (FOR) Pump Controls for Each Day Tank
1. Monitors Motor Starters (up to 2 total) and Overload Protection
2. Pump Run Status.
3. Controls Pumps up to 1.5 HP, Single Phase (3 Phase optional)
4. Programmable Start/Stop Levels
5. Momentary Pump Test Button

G. Filtration/Fuel Recirculation Controls
1. Monitors Filter Differential Pressure Gauge
2. Monitors Filter/separator Water Sensor Kit
3. Programmable 24/7 Filtration/Fuel Polishing Schedule for Main Storage Tank
4. Verifies Component Operations Based on the Programmable Schedule