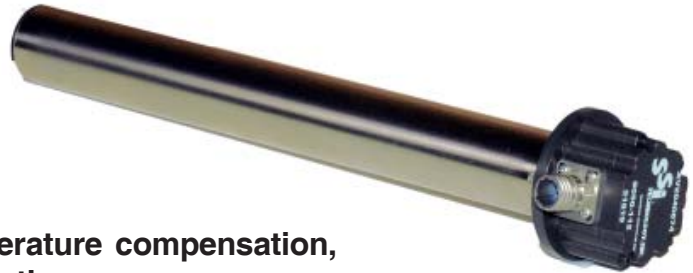




## FG-2400 CAPACITIVE FUEL/OIL LEVEL SENSORS

### **FEATURES**

- Capacitive sensing
- Analog or digital display output
- Solid state - digital
- Serial communication link
- Remote readouts
- Microprocessor controlled
- Algorithms for linearizing, temperature compensation, anti-sloshing and volume calculations
- Robust designed for heavy shock / vibration /extreme temperature environments



The SSI FG-2400 Fuel Level Monitoring system is a microprocessor based solid-state capacitive (no moving parts) gauging device for measuring the remaining fuel. Its capacitive probe is an integral part of the flange-gauge assembly. This sensor was designed to measure fuel tanks in excess of 5,000 gallons, while maintaining an accuracy of +/- 5%. Higher accuracies are attainable on a tank to tank basis.

The FG-2400 generates a continuously proportional output over the total fuel level range.

The sensor portion and the associated electronics of the gauging system will be mounted to the top surface of the fuel tank employing a universal mounting flange. Gauges may be mounted to different fuel tanks / check cap configurations using readily available adapter plates. The probes which consist of two concentric tubes act as a capacitor. This technology uses the principle of a change in dielectric material between its probe components (inner and outer tubes), when the tank is empty the dielectric is air, otherwise the dielectric is a proportional mixture of air and fuel. Built in electronic circuitry measures these changes, analyzes and linearizes it with respect to the tank profile. Relative volumetric fuel level is determined, and subsequently transmitted to a host computer using a noise-immune RS422/RS485 serial communications link. Additionally the output may also be displayed directly on an optional analog or digital readout mounted within the operators view in the Vehicle.



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## SPECIFICATIONS

### **INPUT POWER:**

The FG-2400 may be powered by up to +72 Vdc supplied by the vehicle electrical system. DC-DC isolation will be used.

### **LENGTH:**

Customized to fit the application, usually in 30 to 50 inch range.

### **ACCURACY/REPEATABILITY:**

The repeatability band of the sensor output will be within +/- 5% of static full scale employing a standard calibration profile based on the geometry of the fuel tank. A Higher accuracy, approaching +/-1% is attainable using special calibration techniques.

### **TEMPERATURE STABILITY:**

The FG-2400 will be temperature compensated over the range of -25°C to +85°C. It will correct for volumetric fuel changes (expansion / contraction) as a function of temperature and tank shape, and will provide fuel temperature information in its data output.

