SiteSentinel® Probes and Sensors
Probes • Sensors • Monitoring Accessories
Probes and Sensors

Precision Inventory and Compliance Monitoring

OPW’s comprehensive line of probes, sensors and monitoring accessories help ensure that your gauge-reported fuel inventory levels are accurate and timely, and that your sites are safe and environmentally compliant, at all times. Built from durable, quality components, and engineered from decades of dedicated fueling expertise, OPW fuel monitoring equipment provides peace of mind to fuel site owners and managers alike.

Precise Inventory Measurements

Capable of measuring product level changes to a tenth of a millimeter, OPW’s probes allow for highly accurate fuel monitoring. With probes available for both underground and aboveground tanks, OPW offers precise inventory measurement solutions for any fuel site.

Leading Leak Detection

State-of-the-art precision engineering enables OPW leak detection devices to reliably detect leaks as small as .01 gph. With OPW leak detectors and probes installed, site owners and managers can rest easy knowing they will be notified as soon as a leak occurs or their site falls out of regulatory compliance requirements.

Unparalleled Compatibility

Developed for simple and quick connectivity to an extensive line of SiteSentinel® tank gauges, OPW’s collection of monitoring equipment and accessories streamline both initial installation and regular maintenance processes. This significantly reduces both daily upkeep and site build costs.
Integrated Monitoring Equipment

Compliant. Precise. Reliable.

**Probes**
1. 924B Magnetostrictive Probe
2. 7100V AST Flex Probe

**Sensors**
3. Fuel Sump Sensor
4. The Smart Sensor™
5. Fuel/Water Interstitial Sensor
6. Liquid Only Interstitial Sensor

**Monitoring Accessories**
7. 327 Volumetric Line Leak Detector
8. Density Measurement Sensor

*Pictured equipment does not represent OPW’s full line of sensors. Refer to pages 8 and 9 of this brochure for more information.*
Precise Product Measurement Combined With In-Tank Leak Detection*

The 924B Magnetostrictive Probe

The 924B Probe delivers highly accurate inventory management and in-tank leak detection* for reliable measurement of fuel inventories. The probe features standard stainless steel construction, making it the ideal inventory measurement solution for any gasoline, diesel, ethanol or biodiesel application. An inventory-only model is available for large tanks.

Applications

- As a level 1 probe, the 924B is engineered to cater to the specific needs of most tank applications
- Multi-drop capability allows up to four probes to be connected on a single I.S. module (compatible gauges only)
- Optional density floats provide a measure of all changes in product density within a specified API density range
- Inventory-only probe is available in lengths from 12 feet to 20 feet (3.7 to 6 m)

*In-tank leak detection only applies to the 924B Probe. The 924B Inventory Only Probe does not offer leak detection.

Specifications

924B and 924B Inventory Only Probes:

- Measures product level changes to a resolution of 0.0005 inches (0.0127 mm)
- Measures water level changes to a resolution of 0.01 inches (0.254 mm)
- Linearity over the entire probe length is ±0.04 inches (±1 mm)
- Measures product temperature changes to a resolution of 0.001°F (0.1°C)

924B Magnetostrictive Probe Only:

- EPA Static Leak and Continuous Test Certified
Accurate Inventory Measurement for Aboveground Storage Tanks

The 7100V AST Flex Probe

The 7100V Series flexible probe leverages OPW’s magnetostrictive technology to allow greater precision and reliability in measuring Aboveground Storage Tanks (AST) product levels. Available in lengths of up to 70 feet (21 meters) and compatible with most commonly used fuels, the 7100V probe is designed to cater to large-capacity aboveground storage tanks, regardless of fuel type.

Applications

- The 7100V AST flex probe was designed to be the industry’s most effective probe for AST applications
- With the ability to connect to gauges from up to 984 feet (300 meters) away, the flex probe is ideal for any size site
- Compatible with all common fuel types, the 7100V can fit seamlessly in nearly any fueling operation

Specifications

- Available probe lengths from 12 to 70 feet (3.7 m to 21 m)
- Enclosure Material: PVDF
- Resolution: 0.01 inches (0.254 mm) Inventory Mode
- Distance to Optional VSmart Module: 1,000 feet (305 m) Belden 88760; 500 feet (152 m) maximum Belden 88761
- Maximum Tank Capacity: 99,999,999 gallons (378,541,175) liters
Definitive Volumetric Line Leak Monitoring

327 Volumetric Line Leak Detector

VERSATILE

The VLLD works with a combination of fiberglass and flex pipe and can measure leak rates for the largest pipes in the industry

ECONOMICAL

Line Leak Interface Module is mounted separately near STP motor relays to eliminate the need to run pump-control wires back to the tank gauge console

USER-FRIENDLY

Easy to install in the 2-inch (5.08 cm) STP leak detector port, the VLLD eliminates the need to know exact line lengths or diameters of underground pipes and does not sacrifice SLD tank idle time to run the line test

Specifications

- Programmable to run an optional monthly 0.2 gph (0.76 L/hr) or annual 0.1 gph (0.38 L/hr) compliance test
- Material: Hardened Anodized Aluminum
- Location: Hazardous, Class 1, Division 1, Group D
- Temperature Range: -40° F to 140° F (-40° C to 60° C)
- Data Cable: 1,000 feet (305 m) Belden 88760; 500 feet (152 m) maximum Belden 88761

327 Volumetric Line Leak Detector

Utilizing a highly accurate flow dispenser, the 327 Volumetric Line Leak Detector provides an industry-leading method for detecting and measuring leaks in fuel lines. The VLLD can test volumes for pipes measuring from 1.5 inches to 4 inches (3.8 cm to 10.2 cm) in diameter (the largest pipe in the industry), and can monitor rigid pipe, flexible pipe or a combination of both, making the VLLD the ideal leak detection solution for any site configuration.

Applications

- Able to perform >3 gph (11.4 L/hr) catastrophic line leak test, even if a submersible turbine pump motor is in continuous operation
- Capable of connecting three VLLD sensors via one three-conductor wire back to the building and capable of controlling two separate STP motors installed in the same tank
- Can control up to four STP motors within a single-line manifold set
- Configurable for STP motor control as a way to bring all tanks in a manifold set down evenly

327 Volumetric Line Leak Detector

Definitive Volumetric Line Leak Monitoring

ACCURATE

Compared to pressure-decay methods that use algorithms and user data to determine flow rates, the VLLD reads actual flow volumes to provide a true volumetric line leak measurement

VERSATILE

The VLLD works with a combination of fiberglass and flex pipe and can measure leak rates for the largest pipes in the industry

ECONOMICAL

Line Leak Interface Module is mounted separately near STP motor relays to eliminate the need to run pump-control wires back to the tank gauge console

USER-FRIENDLY

Easy to install in the 2-inch (5.08 cm) STP leak detector port, the VLLD eliminates the need to know exact line lengths or diameters of underground pipes and does not sacrifice SLD tank idle time to run the line test

Specifications

- Capable of >3 gph (11.4 L/hr) catastrophic line leak test, even if an STP relay fault condition occurs where the STP motor is in a continuous run state
- Capable of testing the largest pipe volume in the industry [1.5-inch (3.8 cm), 2-inch (5.1 cm), 3-inch (7.6 cm), and 4-inch (10.2 cm) pipe]
- Will shut off STP motor if a low-level alarm or probe failure has occurred
- Runs precision tests at the pump’s operating pressure
Density Measurement Sensor

Confident Surveillance of Product Quality

The Density Measurement Sensor

Combining industry-leading accuracy for water, product and density measurement, the Density Measurement Sensor uses a single magnetostrictive in-tank probe assembly that enables continuous monitoring of product quality and easy installation. With an accuracy range of ±0.0025 g/cc, the sensor reliably identifies even the smallest changes in product quality.*

Applications

- Helps site managers prevent costly inventory losses caused by contaminated fuels
- Sensor continuously measures the fuel’s density, providing a measure of even the smallest variations in product quality within the API density range
- Density and level measurement are combined on one I.S. channel without the need for a dedicated input channel or additional wiring
- Fuel density reports can be displayed in real time on the SiteSentinel® family of tank gauges or exported to an external display

Specifications

- Provides real-time, accurate density information
- Displays density in kg/m³, g/cc or API
- Applicable in petroleum products designed for both underground (UST) and aboveground (AST) rigid probe applications
- Single sensor per standard in-tank probe or multi-sensor for dedicated triple-sensor density probe
- Material: Nitrophyl, Delrin and stainless steel spring
- Resolution: 0.00004 g/cc
- Accuracy: ±0.0025 g/cc
- Density Range: 0.6 – 1.0 g/cc
- Operating Temperature: -40°F to 140°F (-40°C to 60°C)
- Dimensions: 2 in (diameter) x 11 in (5 cm (diameter) x 28 cm)

*The Density Measurement Sensor is not certified for applications in which it will be subjected to pressures at or above 300PSI. Pressures higher than 300PSI will damage the device, preventing it from providing accurate measurements.
The Smart Sensor™ for SiteSentinel® Tank Gauges

Our Smart Sensors™ inform you of their connection status, eliminating concerns over whether or not sensors are connected to the tank gauge console.

**Record it. Replace it.**

Upon initial system installation, the SiteSentinel® tank gauge console records the serial number, date and time sensors will need to be replaced or changed out.

**Multi-drop. Save money.**

Our Smart Sensor™ technology enables the daisy chaining of sensors during the critical installation period. This eliminates direct wiring runs back to the SiteSentinel® gauge console inside the building, leading to cost savings.

A Sophisticated Sensor for Any Application

OPW offers a comprehensive line of sensors engineered to detect liquid and hydrocarbons in the fuel site components and areas most susceptible to leaks

**OPW Sensor Locations**

1. Interstitial/Annular
2. STP Sump
3. Monitoring Well/Ground
4. Dispenser Pan
OPW Sensors

Single Level Sump Sensor
- Detects liquid in sumps, dispenser pans and other locations where its very presence could indicate a leak has occurred

Liquid Only Interstitial Sensor
- Used primarily in the interstitial area of double-wall tanks
- Can also be used in sumps, dispenser pans and other locations where the presence of liquid could indicate a leak has occurred

Fuel/Water Interstitial Sensor
- Designed for use in the interstitial area of a double-wall tank
- Sensor easily installs and discriminates between fuel and water

Fuel Sump Sensor
- Detects liquid hydrocarbons in STP sumps, dispenser pans and other locations where their very presence could indicate a leak has occurred
Hydrocarbon Vapor Sensor

- Detects hydrocarbon vapors in monitoring wells and the interstitial areas of a double-wall tank

Dual-Level Interstitial Sensor

- Designed for use in the brine-filled reservoir of the interstitial area of a fiberglass double-wall tank
- Contains a dual level float switch that detects level changes of fluid in the tank’s reservoir

Non-Discriminating Dual Float Sensor

- Detects liquid in STP sumps, dispenser pans and other locations where their very presence could indicate a leak has occurred
- Contains two float switches giving the ability to give a high alarm and high, high liquid alarm

Fuel Monitoring Well Sensor

- Used in monitoring wells with fluctuating ground water tables
- Can be placed in the containment areas of tanks, pumps and pipes

Learn More About Probe and Sensor Installation

This video from OPW University will provide you and your team with an in-depth look at the probe and sensor wiring and installation process. Scan the QR code to the left, or enter http://youtu.be/9jRkkA6TM8Q in your web browser to view it.