

Aqueous Ethanol Float Sensor

OPW's Aqueous Ethanol Float Sensor provides industry-leading in-tank detection of water contamination and phase separation.

Phase-separated fuel occurs when water in the tank causes the ethanol to become saturated to the point that it can no longer be suspended, and falls out of the gasoline and settles at the bottom of the tank. Fuel contamination resulting from phase separation can cause significant damage to vehicle engines.

OPW's AEF Sensor detects water level changes and product density changes at the bottom of storage tanks sooner than competing water-detection devices, and unlike competing aqueous ethanol detection devices, OPW's AEF Sensor's real-time density readings are temperature-corrected, which prevents false phase separation alarms.

OPW's AEF Sensor is compatible with rigid probe applications and monitors ethanol blends ranging from E10 to E85. Programmable thresholds allow corrective actions to be deployed before phase separation — and costly inventory losses — occur.

Aqueous Ethanol Float Sensor Features

Part of the

Site Sentinel®

family of products



Precise

AEF Sensor detects water level changes and product density changes almost four times earlier than competing detection devices and eliminates false phase separation alarms



Savings

Preventing fuel contamination helps petroleum marketers minimize financial losses and maintain customer loyalty



Proactive

Programmable density thresholds enable corrective actions to be deployed in a time frame that provides maximum operational uptime



Compatible

The AEF Sensor, which monitors ethanol blends from E10 to E85, seamlessly integrates with OPW tank gauging equipment

- ◆ Provides early detection of water intrusion by sensing water level changes (at 5/16 inch) and product density fluctuations at bottom of the tank
- ◆ Provides real-time fuel density measurements
- ◆ Program tank gauge alarms to activate at specific density thresholds
- ◆ Unlike competing aqueous ethanol floats, OPW's AEF sensor net-corrects for thermal changes in the tank that frequently occur during deliveries, eliminating false phase separation alarms
- ◆ Triggers a warning and then an alarm to accurately and clearly communicate current tank conditions
- ◆ Registers density changes in E85 even if water is completely suspended in the fuel and no water has collected at the bottom of the tank
- ◆ Easily installs on new and existing in-tank OPW magnetostrictive probes
- ◆ Fits through the same 2-inch (5 cm) opening in the tank that's used by the probe

NOTE: See OPW Fuel Management Systems' website at www.opwglobal.com for detailed product literature, manuals and sales representative contact information for your area.

- ◆ Displays temperature-corrected density readings in kg/m³, g/cc or API
- ◆ AEF Sensor calibrates in-tank product density to deliver the most accurate density measurement readings
- ◆ System alarms when sensor detects that the E10 density has exceeded 30 kg/m³ or that E85 density has exceeded 15kg/m³
- ◆ Compatible with rigid probe applications
- ◆ Programmable alarm settings

Specifications

Material: Nitrophyl, Buna, stainless steel, plastic/metal composite magnet

Resolution: 0.0127mm (0.0005 inch)

Accuracy: +/- 1%

Density Range: 720 kg/m³ to 1,000 kg/m³

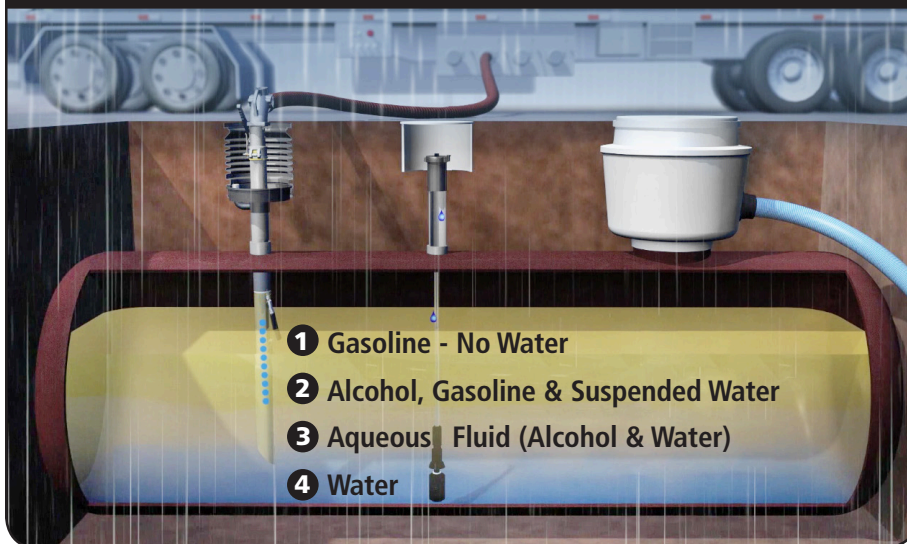
Operating Temperature: -40°C to -60°C (-40°F to 140°F)

Dimensions: 1.95 inch diameter x 8.87 inches long (4.95 cm diameter x 22.53 cm)

How Water Sabotages Fuel Inventory Through Phase Separation

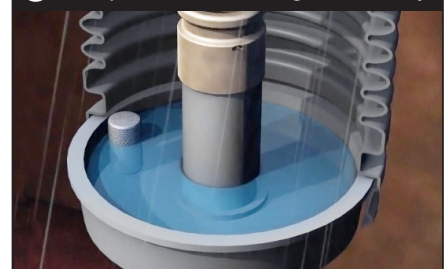
Water is the enemy of fuel. It takes very little water to ruin inventory.

In 10,000 gallons of E10, it takes as little as 40 gallons of water to cause phase separation, a condition when the ethanol becomes over-saturated and can no longer be suspended in the gasoline. This can lead to four distinct layers of inventory:



Water can enter tanks in two ways, which are common and difficult to prevent:

- 1 The spill container during fuel delivery



- 2 A bad riser cap gasket or service fitting

