

SELECTING CONTAINMENT MONITORING SENSORS

No matter what the application is, we have a containment monitoring solution to fit your needs. From dispenser sumps and turbine sumps, to tank interstitial spaces and monitoring wells, we have a sensor option to meet your requirements.



THERE ARE TWO TYPES OF SENSORS...



NON-DISCRIMINATING SENSORS

These sensors are able to detect and send an alarm signal if the presence of liquid appears inside of a containment space.



DISCRIMINATING SENSORS

These sensors are able to detect and send an alarm signal if the presence of liquid appears inside of a containment space and can also differentiate between liquid and hydrocarbons (fuel).

TANK GAUGE REQUIREMENTS

All sensors require an EVO™ Series fuel management system. Depending on the sensor type, either two-wire or three-wire sensor modules are used to power and control the sensors.

Sensor								
Discriminating Capability	✓	✓	✓				✓	
Non-Discriminating				✓	✓	✓		✓
Turbine Sump Applications		✓	✓	✓				
Dispenser Sump Applications	✓		✓	✓				
Tank Interstitial Space Applications				✓		✓	✓	✓
Position Sensitive (Tamper Protection)			✓					
Hydrostatic Monitoring Capability					✓			✓
EVO 200 / EVO 400 Model Number	FMP-DDS-U	FMP-DTS-U	TSP-DMS	FMP-ULS	FMP-UHS	FMP-EIS-U	FMP-DIS-U	FMP-HIS-U FMP-HIS-XL-U
EVO 550 / EVO 5000 Model Number*	FMP-DDS	FMP-DTS	TSP-DMS	FMP-ULS	FMP-UHS	FMP-EIS	FMP-DIS	FMP-HIS FMP-HIS-XL
Typical Application	Dispenser sump applications requiring discriminating capabilities	Turbine sump applications requiring discriminating capabilities	Turbine or dispenser sump applications with tamper protection regulations in place	Turbine and dispenser sumps or drop-down tank interstitial space	Hydrostatic monitoring of a liquid in a double wall sump interstitial space	Dry double wall tank applications including fiberglass and wrap-around	Dry double wall tank applications requiring discriminating capabilities	Double wall tank interstitial space filled with brine solution

*EVO™ 550 and EVO™ 5000 may support additional sensors

DISCRIMINATING DISPENSER SUMP BRITE™ SENSOR (DDS)



The DDS is a discriminating dispenser sump Brite™ sensor which provides reliable monitoring of dispenser pans and containment sumps. Combining magnetic float switch sensors with an innovative polymer strip, the DDS generates three different alarms for the detection of hydrocarbons, for liquid in sump, and when the sump is full. The DDS may be used with EVO™ Series fuel management system ATGs.

HIGHLIGHTS

- Uses magnetic float switches to detect liquid at two levels.
- Innovative polymer strip detects hydrocarbons along sensor and floating on water.
- Compatible with common fuels and chemicals.
- Detects liquid at 1½" from base.
- Detects hydrocarbons on sensor and floating on water.
- Digitally encoded status information sent from microcomputer to ATG from 775+ feet.
- Alarms to indicate liquid in sump, hydrocarbon detected, sump is full, and sensor malfunction.

APPLICATION

For containment sump monitoring.

INSTALLATION

Variety of mounting methods possible depending on location. Bracket provided for quick installation.

Model	Description
FMP-DDS	Discriminating dispenser sump Brite™ sensor (EVO™ 500 and EVO™ 5000)
FMP-DDS-U	Discriminating dispenser sump Brite™ sensor (EVO™ 200 and EVO™ 400)
TSP-KS	Unistrut™ mounting kit

Note: The DDS and the DDS-U sensor communicates with the ATG using 3 wires and 2 wires, respectively.

DISCRIMINATING TURBINE SUMP BRITE™ SENSOR (DTS)



The DTS is a discriminating turbine sump Brite™ sensor that detects the presence of liquid and hydrocarbons when installed in turbine and containment sumps. The DTS is designed to interface with EVO™ Series fuel management system ATGs.

HIGHLIGHTS

- Uses magnetic float switches to detect liquid at two levels.
- Innovative polymer strip detects hydrocarbons along sensor and floating on water.
- Compatible with common fuels and chemicals.
- Detects liquid at 1½" from base.
- Detects hydrocarbons on sensor and floating on water.
- Digitally encoded status information sent from microcomputer to ATG from 775+ feet.
- Alarms to indicate liquid in sump, hydrocarbon detected, full sump, and sensor malfunction.

APPLICATION

For containment sump monitoring.

Model	Description
FMP-DTS	Discriminating turbine sump Brite™ sensor (EVO™ 500 and EVO™ 5000)
FMP-DTS-U	Discriminating turbine sump Brite™ sensor (EVO™ 200 and EVO™ 400)
TSP-KS	Unistrut™ mounting kit

Note: The DTS and the DTS-U sensor communicates with the ATG using 3 wires and 2 wires, respectively.

DISCRIMINATING MAGNETOSTRICTIVE SENSOR (DMS)



The DMS sensor is a fast acting discriminating sensor that utilizes magnetostrictive technology to provide reliable monitoring of dispenser pans and containment sumps. Its floats can detect the presence of water or hydrocarbons and also ensure that the sensor installation has not been tampered with. The DMS sensor can report water warnings and programmable water alarm points as well as product alarms. The DMS sensor is used with EVO™ Series fuel management system ATGs.

HIGHLIGHTS

- Utilizes proven magnetostrictive technology.
- Water warning, water alarm, and product alarm.
- Tamper protection feature will alarm if sensor is moved from installed position.
- Will alarm and recover quickly when hydrocarbons are present.

APPLICATION

For containment sump monitoring.

Model	Description
TSP-DMS-12	Discriminating magnetostrictive sensor, 12" (EVO™ 200 & EVO™ 400, EVO™ 550 and EVO™ 5000)
TSP-DMS-24	Discriminating magnetostrictive sensor, 24" (EVO™ 200 & EVO™ 400, EVO™ 550 and EVO™ 5000)
TSP-KS	Unistrut™ mounting kit

Note: This sensor communicates with the ATG via the TS-PRB probe module.



LIQUID SENSOR (ULS)

The liquid sensor (ULS) is a low cost sensor which may be used with all EVO™ Series fuel management systems. This sensor is also compatible with S940 Sensor Alarm Console. Based on float-switch technology and made of chemically-resistant materials, the ULS may be installed in sumps, dispenser pans, steel double wall tanks or other locations where the presence of liquid indicates a leak has occurred.

Highlights

- Highly reliable float technology and closed output circuit ensures that leaks are detected.
- Chemical-resistant materials assure compatibility with most liquids.

Model	Description
FMP-ULS	Universal liquid sump sensor (EVO™ 200 & EVO™ 400, EVO™ 550 and EVO™ 5000)
TSP-K12	Interstitial sensor riser cap kit for 2" riser pipes

Note: This sensor communicates with the ATG using 2 wires.

Application

For dry steel tank interstitial and containment sump monitoring.

Installation

Each ULS sensor comes with a 25' cable. ½" NPT thread is provided on the compression gland fitting attached to the sensor's cable, allowing it to be suspended from standard electrical boxes and fittings. The sensor may be positioned vertically by adjusting cable length. For steel interstitial tanks, ULS is lowered into the opening provided on the tank and is suspended by optional TSP-K12 installation kit. Other mounting methods available depending upon application and location.



UNIVERSAL HYDROSTATIC SENSOR (UHS)

The Universal Hydrostatic Sensor (UHS) uses float switch technology to continuously monitor liquid filled double wall containment sumps. Normally submerged, the single float UHS will provide an indication if there is a loss of monitoring liquid.

Highlights

- Highly reliable float technology and closed output circuit ensures that leaks are detected.
- Chemical-resistant materials.

Model	Description
FMP-UHS	Universal hydrostatic sensor (EVO™ 200 & EVO™ 400, EVO™ 550 and EVO™ 5000)
HM-KIT	Hydrostatic monitoring installation kit. Includes: flexible brine tube, sensor housing clamp, sensor housing, sensor cap, and hardware

Note: This sensor communicates with the ATG using 2 wires.

Application

Typically used for hydrostatic monitoring of the liquid in a double wall sump interstice.

Installation

Each UHS sensor comes with a 25' cable. The sensor can be installed into the reservoir of a liquid filled double wall containment sump. The sensor must be installed in a vertical position at a level where it is normally submerged. The UHS sensor will alert if the liquid level drops below the bottom of the sensor.

ELECTRO-OPTIC INTERSTITIAL SENSOR (EIS)



The electro-optic interstitial sensor (EIS) may be used with all EVO™ Series fuel management system ATGs. Utilizing electro-optic technology and made of chemically-resistant polysulfone plastic, the EIS may be installed in sumps, double wall tanks or other locations where the presence of liquid indicates a leak has occurred.

HIGHLIGHTS

- Highly accurate electro-optic technology and closed output circuit ensures that leaks are detected.
- Chemical-resistant materials.
- Can be installed in fiberglass or steel double wall tanks.
- Utilizes light-emitting diodes and prisms to indicate if a leak has occurred.

Model	Description
FMP-EIS	Electro-optic interstitial sensor (EVO™ 550 and EVO™ 5000)
FMP-EIS-U	Electro-optic interstitial sensor (EVO™ 200 & EVO™ 400)
TSP-K12	Interstitial sensor riser cap kit for 2" riser pipes

Note: Thie EIS and the EIS-U communicates with the ATG using 3 wires and 2 wires, respectively.

APPLICATION

For dry tank interstitial monitoring.

INSTALLATION

Each EIS comes with 25' of oil-resistant cable. For fiberglass tanks, the EIS is pulled into the interstitial space using a "fish" string or wire. For steel interstitial tanks, the EIS is lowered directly to the bottom of the interstitial space through a 2" NPT fitting provided for that purpose on the tank. Optional installation kits are available which include a riser cap and other parts required to complete installation.

DISCRIMINATING INTERSTITIAL BRITE™ SENSOR (DIS)



The discriminating interstitial Brite™ sensor (DIS) detects the presence of various liquids in tanks as well as sumps and other locations. The DIS is designed to interface with the EVO™ Series fuel management systems.

HIGHLIGHTS

- Installs in the interstitial space of steel and fiberglass double wall tanks and sumps.
- Uses light beam traveling through probe to determine if sensor is wet.
- Microprocessor inside sensor interprets readings and communicates data to the EVO™ Series fuel management system.
- Fail-safe digital communications with built-in alarm if sensor malfunctions.
- Sensor can distinguish between petroleum and water.
- Alarms indicate petroleum present, water present, and sensor malfunction.

Model	Description
FMP-DIS	Discriminating interstitial Brite™ sensor (EVO™ 550 and EVO™ 5000)
FMP-DIS-U	Discriminating interstitial Brite™ sensor (EVO™ 200 and EVO™ 400)
TSP-KI2	Interstitial sensor riser cap kit for 2" riser pipes

Note: The DIS and the DIS-U communicates with the ATG using 3 wires and 2 wires, respectively.

APPLICATION

For dry tank interstitial monitoring.

INSTALLATION

Each DIS comes with 25' of oil-resistant cable. For fiberglass tanks, the DIS is pulled into the interstitial space using a "fish" string or wire. For steel interstitial tanks, the DIS is lowered directly to the bottom of the interstitial space through a 2" NPT fitting provided for that purpose on the tank. Optional installation kits are available which include a riser cap and other parts required to complete installation.



HYDROSTATIC INTERSTITIAL BRITE™ SENSOR (HIS)

The hydrostatic interstitial Brite™ sensor (HIS) detects leaks in double wall tanks where the interstitial space is filled with a liquid brine solution. For use with all EVO™ Series fuel management systems, the HIS polyester, Nitrile, and epoxy construction is compatible with all types of brine.

HIGHLIGHTS

- Versatile sensor for virtually all fiberglass double wall tanks equipped for hydrostatic leak detection.
- Microcomputer monitors liquid at varying levels within tanks and relays digitally encoded status information via the fail-safe Brite™ sensor digital communication system to fuel management system or Tank Sentinel® ATGs, alerting of any alarm conditions.

Model	Description
FMP-HIS	Hydrostatic interstitial Brite™ sensor, 11" (EVO™ 550 and EVO™ 5000)
FMP-HIS-XL	Hydrostatic interstitial Brite™ sensor, 21" (EVO™ 550 and EVO™ 5000)
FMP-HIS-U	Hydrostatic interstitial Brite™ sensor, 11" (EVO™ 200 and EVO™ 400)
FMP-HIS-XL-U	Hydrostatic interstitial Brite™ sensor, 21" (EVO™ 200 and EVO™ 400)
TSP-KV4**	Hydrostatic sensor vented riser pipe cap kit for 4" riser pipes

Note: The HIS and HIS-XL communicates with the ATG using 3 wires. The HIS-U and the HIS-XL-U communicates with the ATG using 2 wires.

*Not including cable.

** One TSP-KV4 is already included with each HIS or HIS-XL sensor

APPLICATION

For liquid-filled tank interstitial monitoring.

INSTALLATION

- Lower HIS to the bottom of the brine reservoir of double wall tank.
- The normal brine level should reside half way up the sensor.
- Sensors include the TSP-KV4 vented 4" riser cap.



HORIZONTAL FLOAT SWITCH SENSOR (HFS)

The HFS sensor is designed for liquid detection in dry fiberglass tank interstitial spaces. These 2-wire, non-discriminating liquid sensors may be used with EVO™ 550 and EVO 500™ Automatic Tank Gauges (ATGs) as well as the S940 alarm console.

HIGHLIGHTS

- Fiberglass interstitial monitoring using a 2-wire sensor.
- For dry fiberglass tank interstitial monitoring.
- Highly reliable magnetic-float/reed-switch technology.
- Chemical-resistant materials.
- UL listed, ATEX approved, IECEx approved.

Model	Description
FMP-HFS	Horizontal float switch sensor (EVO™ 550 and EVO™ 5000)
TSP-HFS	Horizontal float switch sensor (S940 alarm console)
TSP-KI2	Interstitial sensor riser cap kit for 2" (51 mm) riser pipes

APPLICATION

For dry fiberglass tank interstitial monitoring.

INSTALLATION

Each HFS comes with 25' of oil-resistant cable. For fiberglass tanks, the HFS sensor is pulled into the interstitial space using a "fish" string wire. Optional installation kits are available which include a riser cap and other parts required to complete the installation.



MONITORING WELL SENSOR (MWS)

The monitoring well sensor (MWS) is a discriminating liquid sensor which detects the presence of hydrocarbons floating on groundwater. Using a float switch and innovative conductive polymer strip, the sensor identifies hydrocarbons anywhere along the length of the sensor. The MWS sensor can be used with EVO™ 550 and EVO™ 5000 fuel management system ATGs.

HIGHLIGHTS

- Unique alarms for the detection of hydrocarbons or decreased groundwater levels.
- Completely reusable even after several exposures to hydrocarbons.
- Available in four different lengths to accommodate well depth.
- A microcomputer within sensor detects the presence of hydrocarbons and alerts a fuel management system of alarm conditions via digitally-encoded information.

SPECIFICATIONS

Application

- For use in wet monitoring wells.

Installation

- Normally installed in 4" groundwater monitoring wells.
- Integral well cap may be locked with standard padlock to prevent unauthorized access.

ORDERING INFORMATION

Model	Description
TSP-MWS-10	10' monitoring well sensor (EVO™ 550 and EVO™ 5000)
TSP-MWS-15	15' monitoring well sensor (EVO™ 550 and EVO™ 5000)
TSP-MWS-20	20' monitoring well sensor (EVO™ 550 and EVO™ 5000)
TSP-MWS-25	25' monitoring well sensor (EVO™ 550 and EVO™ 5000)

Note: This sensor communicates with the ATG using 3 wires.



DISCRIMINATING VAPOR SENSOR (DVS)

The discriminating vapor Brite™ sensor (DVS) detects the presence of gas or vapor molecules when installed in dry monitoring wells or containment space where vapor detection is necessary. The DVS is designed to interface with EVO™ 550 and EVO™ 5000 Automatic Tank Gauges.

HIGHLIGHTS

- Detects vapor, gas and rising groundwater when installed in a monitoring well.
- Fail-safe digital communication with built-in alarm if sensor malfunctions.
- Senses ambient temperature to minimize false alarms as well as vapor, gas and groundwater.
- Alarms to indicate sensor malfunction.

APPLICATION

For use in dry monitoring wells.

INSTALLATION

Equipped with twenty feet of oil-resistant cable for installation in 2" (51mm) and 4" (102mm) monitoring wells located around underground tanks. Communicates with console from 775+ feet (236m).

Model	Description
TSP-DVS	Discriminating vapor Brite™ sensor (EVO™ 550 and EVO™ 5000)
TSP-KW4	Vapor sensor monitoring well pipe cap kit for 4" (102mm) riser pipes

Note: This sensor communicates with the ATG using 3 wires.



LEVEL SENSOR (HLS)

The HLS level sensor is an overfill prevention switch which is compatible with all EVO™ 550 and EVO™ 5000 fuel management system ATGs. This sensor is also compatible with S940 Sensor Alarm Console. It may be adjusted to operate over a wide range of levels. The HLS is based on float-switch technology and is made of chemical-resistant materials to assure compatibility with most liquids. Each sensor is supplied with jacketed cable five feet in length. The HLS's normally closed output circuit provides supervised operation, ensuring that broken wires and similar failures will not go undetected.

The HLS sensor is installed in a 2" NPT fitting on the tank. The level at which it operates may be adjusted by loosening a fitting and moving the sensor's shaft in or out of the tank as required.

APPLICATION

Overfill protection switch.

THEORY OF OPERATION

The secret to the HLS sensor's reliability is its float switch technology. A small magnetically-activated read switch is located inside the body of the sensor. Tiny magnets are positioned inside a lightweight float which is free to move up and down along the shaft so that the magnets are below the read switch. When the sensor is immersed in liquid, the float rises and the magnet activates the read switch, signaling the ATG that the high limit has been reached.

Model	Description
TSP-HLS-15	High product level sensor, 15" long, installed in tank (EVO™ 550 and EVO™ 5000)
TSP-HLS-15/SS	High product level sensor, stainless steel 15" long, installed in tanks containing alternative fuels (EVO™ 550 and EVO™ 5000)
TSP-HLS-30	High product level sensor, 30" long, installed in tank (EVO™ 550 and EVO™ 5000)
TSP-HLS-30/SS	High product level sensor, stainless steel 30" long, installed in tanks containing alternative fuels (EVO™ 550 and EVO™ 5000)

Note: This sensor communicates with the ATG using 2 wires.