



## APPLICATION NOTE

# Fuel Quality Monitoring in Fuel Storage and Dispensing

### The challenges facing fuel storage and dispensing companies

The fuel distribution industry faces many challenges when it comes to storage and dispense. These include :



Accounting for variations in fuel inventory as the liquid expands and contracts due to temperature changes, resulting in volume errors.



Preventing mistakes during delivery leading to fuel being loaded into the wrong storage tanks.



Detecting water contamination of ethanol containing gasoline caused by condensation, tank leakage or from the fuel supplier.



Converting volume into mass measurement for mass based commercial transactions.



## DEVIL<sup>®</sup> SOLUTION

AVENISENSE introduces the DEVIL<sup>®</sup> to the hydrocarbon fuel industry. This innovative, patented, sensor provides a high performance, cost-effective method for in-line or in-tank density and viscosity measurement for monitoring fuel quality.

Thanks to its small footprint and intrinsically safe design, DEVIL<sup>®</sup> is easily integrated into a fuel delivery system during transportation and from the loading terminal to the dispense point to monitor fuel density, viscosity and temperature. With its excellent dynamic behavior and the temperature compensated density, the DEVIL<sup>®</sup> sensor is able to detect and report any changes in your products, including fuel crossover, water contamination and adulteration.

By actively monitoring fuel quality, fuel suppliers can spot changes in fuel quality sooner to protect the brand image, maintain customer loyalty and reduce financial risk.



## DEVIL<sup>®</sup> HIGHLIGHTS



### Constant quality

DEVIL detects in real-time the slightest changes in fuel composition, insuring storage and deliver of high quality fuels.



### Accurate invoicing & savings

The continuous measurement of fuel density might enable a switch from volumetric to mass fuel sales for more accurate inventory accounting.



### Increased brand image

Thanks to constant fuel quality monitoring customer loyalty is improved.



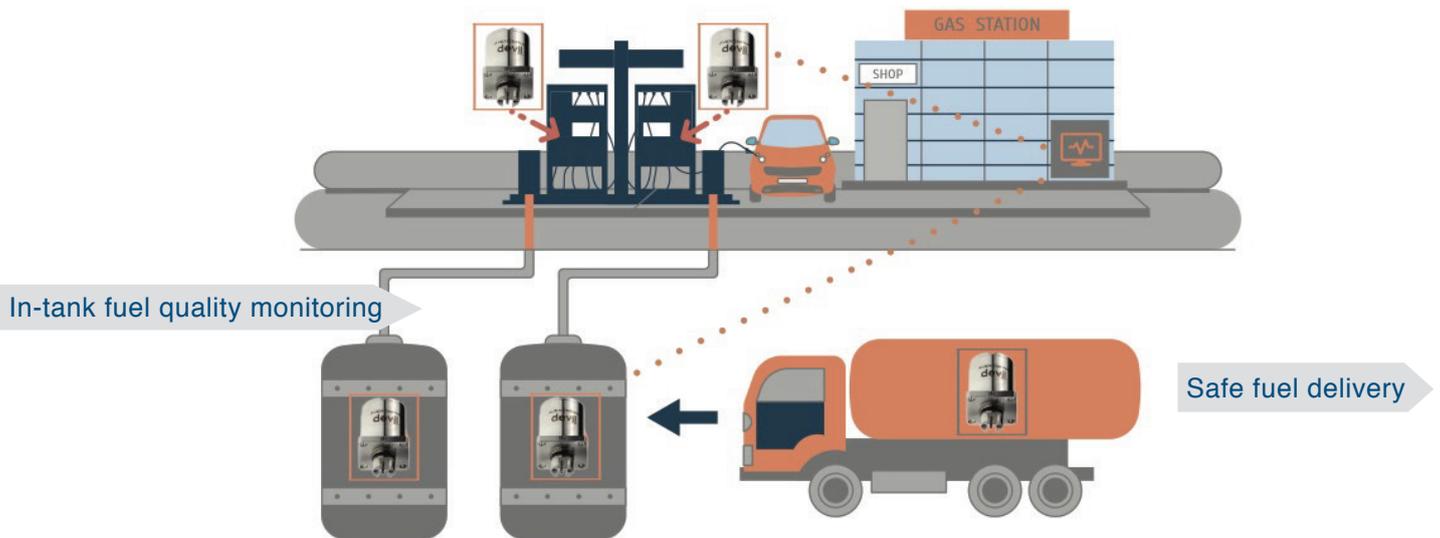
### Robustness

Our solution is designed for operating in hazardous environments, mounted in the elements and accurate over a wide temperature range.



➤ Example of a DEVIL installation for in-line monitoring of fuel density on a fuel dispensing pump.

### From volume to mass conversion



➤ DEVIL<sup>®</sup> complete fuel monitoring solution



Don't wait any longer to optimize your fuel sales,  
contact us [sales@avenisense.com](mailto:sales@avenisense.com)