



Real-Time Automotive Products-of-Combustion Water Vapor Sensor VIASENSOR HS-3000

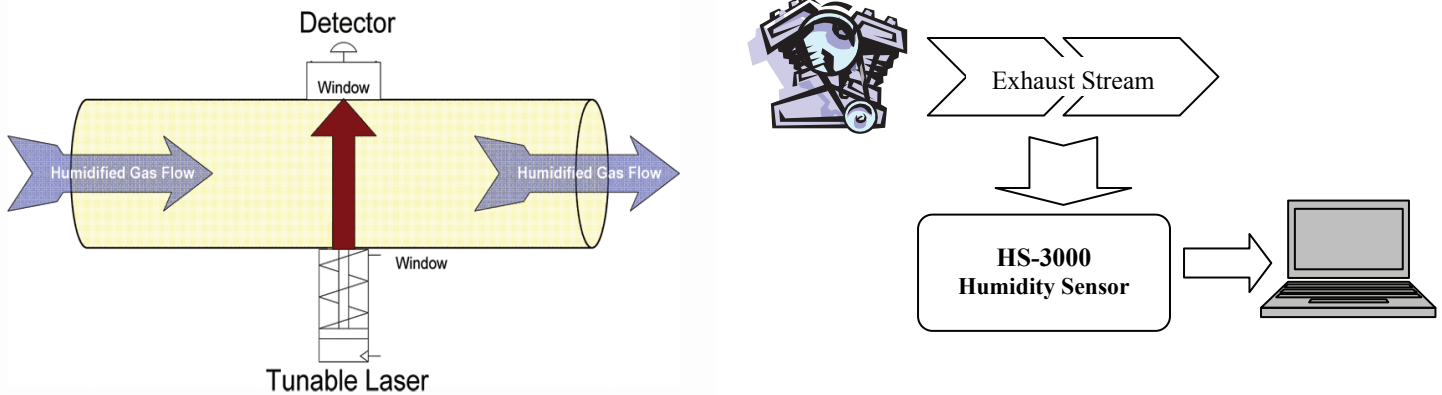
The VIASENSOR HS-3000 real-time humidity sensor uses patent pending miniature laser technology to enable real-time, accurate, and reliable measurement of the water vapor content of automotive and combustion exhaust gases. The HS-3000 provides automotive researchers and developers with a solution for real-time humidity measurements at temperature.

The VIASENSOR product family uses a laser-based design that is independent of a particular gas composition or pressure in order to make measurements. There is negligible interference or drift from products of combustion or other contaminants, allowing the VIASENSOR to accurately measure the molecular absorption of water vapor in high temperature environments, such as analysis of a variety of combustion gases. The VIASENSOR is not affected by common contaminants found in those environments, permitting a continuous, real-time monitoring of dew point in high temperature applications.

The HS-3000 uses the same non-contact laser absorption spectroscopy technology as the other members of the VIASENSOR Product Family. This model has been optimized to cover the range of water vapor concentration typically found in products of combustion of hydrocarbons with air. This is particularly useful in measuring the water vapor content of the exhaust of an internal combustion engine during its warm-up period. Without this measurement it is nearly impossible to convert the concentrations of other exhaust gases to a "dry basis" as usually required by regulatory agencies.

The VIASENSOR HS-3000 solves the key challenges of accurately measuring the water vapor levels in products-of-combustion of automotive and combustion exhaust systems.

Non Contact Laser Absorption Spectroscopy



Features	Benefits
<ul style="list-style-type: none"> HS-3000 has been designed specifically for the automotive and combustion processes. Dew point range: 10 to 70°C Operates over a wide range of flow rates 	<ul style="list-style-type: none"> Dew points at high humidity and high temperature can be readily measured within existing lab set-ups. Allows the user to experiment over a wide range of products of combustion compositions with high humidity, high temperature, and various flow rates.
<ul style="list-style-type: none"> Is the only solution that provides real time, continuous, and fast-responding dew point measurement Provides accurate and reliable dew point data 	<ul style="list-style-type: none"> The user can monitor the dew point of the exhaust gas in real time while testing IC engines during cold start-ups and at temperature, allowing immediate performance information and feedback during testing. Data can be taken as often as every second or faster.
<ul style="list-style-type: none"> Designed to prevent condensation No drift over time; No calibration needed 	<ul style="list-style-type: none"> No delays or resets are required between measurements due to water condensation problems. This translates to easy set-up, operation, and time savings.
<ul style="list-style-type: none"> Dew point can be measured independently of the gas mixture components (normal air, typical products-of-combustion, typical fuel components, CO, CO₂, NO_x, do not overlap with the H₂O absorption line) 	<ul style="list-style-type: none"> VIASENSOR measures dew point for a single component gas or mixture of gases without interference from other gases or contaminants.
<ul style="list-style-type: none"> VIASENSOR measurement approach is simple to implement, low cost, and robust. Analog 0-5V Output, and RS232 Serial Output Modest package size and weight 	<ul style="list-style-type: none"> Saves money and time in the set-up, measurement and data collection. Provides the user with a frustration-free testing experience. Allows convenient and automatic data collection by data logger with analog input or by computer via serial port or USB adapter.

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