

# Density analyzers for Slurries

9690 Series **New!**

## Hybrid Sensor Technology Slurry Density Analyzer



### Application

Rhosonics Analytical is proud to present the World's first non-intrusive inline density meter which eliminates virtually all known disadvantages of existing systems on the market.

The Rhosonics sensor of the Model 9690 Ultrasonic Density Analyzer employs only one, simple to install, flush mounted probe, which can be installed in a tank or in an existing pipeline, or supplied with our UFTC Full Bore Flow-Through cells, see picture.

### Benefits

- Very easy to install
- Density measurement, independent of medium type
- Fully inline, zero intrusion
- Very insensitive to gas bubbles
- Safe and durable probe system

### Description

At last a new and extremely reliable technology is available for the heavy industry to measure slurry and suspension density, inline, and with a minimum of installation and maintenance effort. This means that inline slurry monitoring is now feasible, without drawbacks of other inline density measurement methods, like nuclear and microwave systems.

The abrasive and corrosion resistant sensor material, standard made of PEEK, well protects the internal elements, which take care of transmitting and receiving of a broad spectrum of ultrasonic sound waves. Through the interaction of the sound between the contact surface and the fluid to be measured, the Model 9690 derives a complete image of the slurry density, **without the need for the sound to pass through the fluid**. From the imaged spectra, the system derives the density of your slurry, regardless of composition, particle size and other properties of the particles.



The Slurry Analyzer of the Future

## Features

- High accuracy and repeatability
- Suitable for all types of slurries
- Maintenance free
- Probe type available to suit your application

## Industries

The extremely powerful and revolutionary technology allows inline fluid density measurement of any known slurry. Field tests and experiments with a large variety of different compositions prove the Model 9690 analyzer's versatility.

- Limestone, Gypsum
- Silicon carbide, Zirconium Carbonate
- Sand, Cement, Concrete, Dredging sludge
- Ground Ore, Drilling Mud
- Cutting and Polishing Slurry

## Other solutions

Model 9690 measures the density of the slurry. When liquor density is desired or in case you wish to measure the suspended solids (TSS), or all three parameters independently, then Rhosonics Model 9670 with Full Bore Flow Through sensors is the instrument of your choice.

Please advice the selection table on our website for the various models.



Hybrid 1" ANSI UFTW Wafer sensor

## Specifications

Method	Hybrid Ultrasonic Spectroscopy	
Density range	Auto ranging 500...3000 g/l	
Temperature	-10 ... 150 °C	
Readout	Density, temperature, SG	
Accuracy	+/- 1 g/l (0.1 g/l resolution)	
Response time	<1 to 60 s (adjustable)	
Analog outputs	(2x) 4-20 mA (+/- 0.02%)	
Alarm outputs	(2x) SPDT, Hi-Hi, Lo-Lo	
RS-232 output	Modbus through RS-232	
Ethernet TCP/IP	Option (through web server)	
Other options	Profibus DP, Hart, PC link	
Datalogging	1 year via USB memory stick	
Housing	/WPF	Painted steel IP65, 300x320x120 mm
	/SPLT	Split type for customer casing
	/PAN	Panel mount
Terminal	/MD	5,7" Monochrome Touch Screen
	/CD	5,7" Colour Touch Screen
Power	/VAC	90-240 VAC, 10W
	/VDC	24VDC, 10W
Probe UMP-39	PEEK Diver probe, 70x100 mm, with 20"x 1 1/4" 316L Rod, 20 m Tefzel cable	
Probe UFTW	Flow-Through, Full Bore Wafer Sensor, 1-3"	
Probe UMCS	PEEK probe w/ flange, for installation in pipe/tank, optional with weld adapter kit	
Cable	/ST	Standard cable, 7 mm, <150m
	/HD	Heavy duty cable <150m

## Installation

Three methods probe installations are available to suit your specific application.

- UMP-39 diver/immersion probes are available with different extension length, for easy installation inside a tank which is accessible from the top.
- UFTW Wafer sensor (1 to 3" pipes)
- UMCS type probe with weld adapter can be installed permanently in any tank or pipe size of 4" and larger.



Hybrid UMP-39 SS Diver probe

Continuous in-line monitoring & Process control



## **The Solution Specialist**

The mission of Rhosonics Analytical is to provide solutions for In-line concentration analysis of virtually all existing process liquids, including electrolytes, emulsions, suspensions and slurries.

For almost two decades, Rhosonics Analytical has been focusing on the development and employment of high-performance ultrasonic technologies for in-line liquid concentration analyzers and non-destructive testing of materials.

### **Our products**

- In-line concentration analyzers for virtually all existing process liquids, including solutions, electrolytes, emulsions, suspensions, solids and slurries.
- Piezo composite transducers for Ultrasonic NDT (Non-Destructive Testing) for new inspection methods, including ToFD and Phased Array.

### **The Solution Specialist**

Rhosonics Analytical is The Solution Specialist for the design, production and supply of ultrasonic in-line process analyzers for liquids and slurries in any industry world wide.



## **Contact & Distributors**

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**Rhosonics - The Solution Specialist**