

The VS-1000 Sensor System measures dissolved concentrations real-time 24x7. With an extremely low cost of ownership. Concentration is measured directly, not inferred or calculated. Easy to install, easy to integrate.

Product Specifications

VS-1000 Sensor System Products In-line Infrared Process Control Sensors

**Measure Concentration Directly
and Economically 24x7**



VitalSensors Technologies is an applications specific spectroscopy company that develops and markets leadership **In-Line Networked Smart Infrared Sensors** for real-time process control. VitalSensors' products are designed for use by Food, Beverage, Petrochemical and Pharmaceutical companies. Our products offer the following benefits.

Direct In-Line Infrared Measurements of Process Contents - VS-1000 Sensors directly measure reliably in real-time the true concentration and temperature of fluids in a process stream, tank, or filler. The VS-1000 Sensors can be implemented in flow or no flow conditions and are not affected by pressure spikes or extreme working conditions. The sensor also operates during cleaning and sterilizing in place.

Service and Maintenance Savings - VS-1000 Series Sensors are designed to be maintenance free – solid state devices with no moving parts.

Improve Plant and Asset Utilization - The proven reliability and accuracy of the VS-1000 Sensors provide plant personnel with accurate measurements 24x7 – providing operators valuable process data

Network Device Real-Time Data- VS-1000 Series Sensors are can be implemented standalone or as part of a process control network under PLC control.

Product Specifications

System includes inline sensor, connection cable, local display and Windows™ based software for monitoring and setup

Sensor Application-Dissolved	VS-1000C CO2	VS-1000A Ethanol/Alcohol	VS-1000B Brix/Diet	VS-1000AC Organic Acid
Measuring Method	Mid Infrared spectrometer with Attenuated Total Reflectance (ATR) sampling			
Measuring Range	0 to 6 v/v 0 to 12,000 ppm 0 to 12,000 mg/l	0 – 20 w/w % standard 0-100 w/w % customizable	0 – 20° Brix standard 0-100° Brix customizable	0 – 5 w/w % standard 0-100 w/w % customizable
Accuracy	± .02 v/v ± 39.2 ppm ± 39.2 mg/l	± .02 w/w %	± .01° Brix	± .005 w/w %
Resolution	.01 v/v 1 ppm 1 mg/l	.01 w/w %	.01° Brix	.01 w/w %
Repeatability (8 hour test)	.008 v/v 16 ppm 16 mg/l	.01 w/w %	.008° Brix	.008 w/w %
Measuring Interval	100 ms			
Data Output Interval	500 ms to 30s (user defined)			
Operating Process Temperature	-2°C to +85°C (+28.4°F to 185°F) in 40°C (104°F) process temperature spans Extended temperature models available to 120°C (248°F)			
Temperature Display Range	-5°C to +85°C (+23°F to 185°F)			
Maximum CIP Temperature	+85°C (+185°F)		Extended temperature option available	
Maximum Line Pressure	10 bar (150 psi)			
Process Connection	Tuchenhagen Varinline® connection fitting (DN65)			
Dimensions (Sensor)	82.6mm (3.25 in) W x 82.6mm (3.25 in) H x 82.6mm (3.25 in) D			
Enclosure	IP65 (NEMA4)			
Shock Resistance	100G ½ sine wave or 6 foot drop on concrete			

Operator Interface – VS-300 Sensor Management Station

Display	Concentration, Temperature and Time on three-line VFD display
Cable (Distance to Sensor)	4.6m (15 ft.)
Analog I/O	4-20mA (optional)
Fieldbus Interfaces	Ethernet, EtherNet/IP (optional), Profibus PA (optional)
Power	120/240 VAC, 50-60 Hz (auto sensing)
Dimensions (WxHxD VS-300 SMS)	222.3mm (8.75in) W x 290.8mm (11.5 in) H x 139.7mm (5.5 in) D
Enclosure	IP65 (NEMA4)
Ambient Temperature	-5°C to +40°C (+23°F to 104°F)
Shipping Weight (Total System)	9.07 kg (20 lbs)
Approvals	CE, FCC, VCCI Class A, AS/NZS Class A

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3 Post Office Square, Acton, MA USA
508-978-6450
508-978-0590 (fax)
www.vitalsensortech.com


VitalSensors TECHNOLOGIES