BV3000E Beverage and Soft Drink Monitor
Infrared Inline Process Control Sensor

Direct real-time ingredient measurements 24x7
CO_2, Brix/Sugars and Organic Acid (for inline Diet)

BevSense

The BV3000E Beverage and Soft Drink Monitor measures dissolved ingredients real-time 24x7. Ingredients are measured directly, not inferred or calculated. BV3000E is easy to install, easy to integrate and has a low cost of ownership.

BevSense LLC is the leader in innovative, inline instruments for the food, beverage and pharmaceutical industries. The BV3000E Beverage and Soft DrinkMonitor measures up to three concentrations simultaneously using one economical sensor.

Real-time, inline concentration readings available for dissolved:

- Dissolved Brix/Sugars
- Dissolved Organic Acid (for inline Diet)
- Dissolved CO_2

Precision Infrared Measurements of Process Contents — BV3000E Sensors provide real-time concentration and temperature readings for fluids in a process stream or in a tank. BV3000E Sensors can be implemented in flow or no flow conditions and are not affected by pressure spikes, density, color, viscosity or extreme working conditions.

Maintenance and Cost Savings — BV3000E series sensors are state of the art, solid state devices which contain no moving parts and require no maintenance. MTBF $\geq$ 50,000 hrs.

Improved Plant and Asset Utilization — The proven reliability, accuracy and repeatability of the BV3000E Sensors provide plant personnel with real-time process control data for monitoring and blending 24x7.

Networked Devices Providing Real-Time Data — BV3000E sensors can be implemented as standalone units or as part of a process control network under PLC control.

BevSense

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Product Specifications

System includes inline sensor, cable, Sensor Management Station with local display and Windows™-based software

Part #s	BV3000EBSM (Brix, CO2), BV3000EBSMA (Brix, CO2, Organic Acid/Diet) or BV3000EBSBA (Brix, Organic Acid/Diet)		
Parameter Measured	**Brix**	**CO2**	**Organic Acid (for inline Diet)**
Measuring Range	0 – 20° Brix standard 0 -100° Brix customizable 0 – 2000 mBrix	0 to 6 v/v 0 to 12,000 ppm 0 to 12,000 mg/L 0 to 12 g/L	0 – 5 w/w standard 0-100 w/w % customizable
Accuracy	± .01° Brix ± .1° mBrix	± .02 v/v ± 39.2 ppm ± 39.2 mg/L or .0392 g/L	± .005 w/w %
Resolution	.01° Brix	.01 v/v 1 ppm 1 mg/l or .001 g/L	.01 w/w %
Repeatability(8 hour test)	.008° Brix	.008 v/v 16 ppm 16 mg/l or .016 g/L	.008 w/w %

Measuring Method	Mid Infrared spectrometer with Attenuated Total Reflectance (ATR) sampling
Measuring Interval	100 ms
Data Output Interval	100 ms to 30s (user defined)
Operating Process Temperature (in 40°C / 104°F spans)	-2°C / 28.4°F to 85°C / 185°F – Standard Models 120°C / 248°F – Extended Temperature Model (with cooling jacket)
Temperature Display Range	-5°C to +85°C (+23°F to 185°F)
Maximum CIP Temperature	85°C / 185°F (standard model) 120°C / 248°F (extended temperature model)
Maximum Line Pressure	10 bar (150 psi)
Process Connection	68mm 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	IP68 (NEMA4)
Shock Resistance	100G 1/2 sine wave or 6 foot drop on concrete
Operator Interface – BV302 Sensor Control Rack	
Display	BV3000E Sensor Monitor on Touchscreen Display
Cable (Distance to Sensor)	7.6m (25 ft.)
I/O	4-20mA for Remote In available with PLC option 4-20mA outputs available
Fieldbus Interfaces	Ethernet, EtherNet/IP standard
Power	120/240 VAC, 50-60 Hz (auto sensing) SOLA power conditioning
Dimensions (WxHxD BV300 SMS)	36.30 in (922 mm) H in 23.62 in (600mm) W x 24.02in (610mm) D tIP67 (NEMA4)
Enclosure	IP65 (NEMA4) ATEX optional
Ambient Temperature	-5°C to +40°C (+23°F to 104°F)
Shipping Weight (Total System)	68 kg (150 lbs)
Approvals	CE, FCC, VCCI Class A, AS/NZS Class A

p/n BV3000EBSM/ps0112