BV3000E Juice and Diet Beverage Monitor
Infrared Inline Process Control Sensor

Real-time ingredient measurements 24x7
Brix°, Acid, Brix°/Acid Ratio and Temperature

The BV3000E Juice and Diet Monitor measures dissolved ingredients real-time 24x7. Concentrations 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. Juice and soft drink producers can usethe BV3000E Juice and Diet Beverage Monitor to measure up to three concentrations simultaneously using one small economical sensor.

Real-time, inline concentration readings for dissolved:

- Brix° / Sugars
- Organic Acid (TA)
- Brix° / Acid Ratio
- Temperature

Precision Infrared Process Measurements — 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 high technology solid state devices which contain no moving parts and require no maintenance. MTBF ≥ 50,000 hrs.

Improved Plant and Asset Utilization — Reliable and accurate 24x7 measurement data leads to fewer line stops, alarms and product waste.

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.

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Product Specifications

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

Part #s	BV3000EBSMJ-SS (Brix°, Total Organic Acids (TA) and Brix°/Acid Ratio)		
Parameter Measured	**Brix°**	**Organic Acid (TA) for inline Diet**	**Brix°/Acid Ratio**
Measuring Range	0 – 20° Brix° standard 0 -100° Brix° customizable 0 – 2000 mBrix°	0 – 5 w/w standard 0-100 w/w % customizable	n/a
Accuracy	± .01° Brix° ± .1° mBrix°	± .005 w/w %	n/a
Resolution	.01° Brix°	.01 w/w %	.01
Repeatability (8 hour test)	.008° Brix°	.008 w/w %	n/a

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 Model -2°C / 28.4°F to 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 or similar (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