



InnovaSonic® 207i Ultrasonic Flow Meter with BACnet

BACnet Digital Communications and Thermal Energy BTU for Easy Integration with Building Energy Dashboards

Monterey, California – Sierra is pleased to announce that its InnovaSonic® 207i Liquid Ultrasonic Flow Meter now supports [BACnet](#) digital communication protocol for easy building automation and control. With BACnet, Modbus RTU and Thermal Energy BTU capability, the 207i offers facilities managers the complete water flow energy management solution.

BACnet is a communications protocol for Building Automation and Control (BAC) networks that is governed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), SSPC 135, ANSI, and ISO 16484-5 standard protocol. BACnet Digital Protocol is designed specifically for building and automation control networks and is quickly becoming the industry standard for large facility and manufacturing automation, HVAC, and chiller manufacturers. “The combination of Sierra’s 207i Ultrasonic Liquid Flow Meter with Thermal Energy BTU capability and BACnet digital communication protocol make the 207i the perfect plug and play water meter for the building automation sector,” Scott Rouse, VP of Product.

Designed, built and calibrated for non-intrusive liquid flow metering, the [207i transit-time ultrasonic flow meter](#) is an ideal solution for thermal energy/BTU metering. The 207i calculates thermal energy / BTU by determining the amount of heat transferred between the cold and hot flow legs of a heating or cooling process. This provides end users with the high quality flow energy data required to manage energy costs.

The 207i also makes installation much easier. Clamp-on sensors means no pipe cutting or expensive plumbing. In addition, a unique visual sensor spacing tool on the local display, or via software app, allows end users to slightly move the sensors together or apart to position an indicator line between “goal posts” to ensure optimal signal strength. This gives peace of mind that the meter is installed correctly and ready to measure flow.

The 207i ensures accuracy of +/-0.5% of reading from 0.16 to 40 ft/s (0.05 to 12 m/s) even if liquid density changes as the temperature of a flowing liquid moves up and down over time. The 207i is the first ultrasonic flow meter to have dynamic real-time liquid density compensation to assure the best possible accuracy. Since transit-time ultrasonic flow meters measure liquid flow rate by detecting the speed of sound in the liquid, a small change in liquid density will impact the speed of sound measurement and thus impact accuracy. Unlike other ultrasonic meters that assume a fixed liquid density, the 207i calculates liquid density in real-time by adding a temperature input from a transmitter provided by Sierra or by using an external input from an existing transmitter.

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The 207i is also the first transit-time ultrasonic flow meter to come with a comprehensive software package of apps for ease of use, field upgrades, and calibration validation. Engineers and operators can use apps like MeterFit™ to help optimize signal strength to ensure best performance. EnergyPro™ allows you to fully configure your thermal energy / BTU flow energy measurement system, including datalogging and totalization of all energy functions. Apps like ValidCal™ Diagnostics make field calibration validation easy. Engineers and operators can use apps for easy setup, field upgrades, and validation of hardware and firmware.

Key Features of 207i:

- Accuracy +/-0.5% of reading from 0.16 to 40 ft/s (0.05 to 12 m/s)
- Fluid: Water and all liquids
- Flow range from 0.16 to 40 feet/sec (0.05 to 12 meters/sec)
- Pipe sizes from 2 to 236 inches (50 to 6000 mm)
- Real-time dynamic density and heat capacity calculation as liquid temperature changes
- Ease-of-use and installation with software apps
- Clamp-on or insertion/optional RTDs for Thermal Energy/BTU
- Entire system calibrated as a package
- Digital Output: RS-485, optional Modbus RTU, optional BACnet

InnovaSonic 207i is ideal for common applications like thermal energy/ BTU measurement, cooling and heating fluid measurement, water & wastewater, leak detection in piping systems, monitoring & controlling of HVAC systems, and more.

[Learn more](#) about the InnovaSonic 207i.

See how our transit time ultrasonic flow meter is making installation easier, [watch video](#).

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About Sierra

A global leader in flow measurement and control for over 45 years, Sierra instruments designs and manufactures fluid flow measurement and control solutions for customers spanning across global industries as diverse as scientific research, oil & gas, energy management, semiconductor, clean energy, aerospace and biotech to name a few. In everything we do, we challenge the status quo and thrill in doing the “never before possible” to continually push our technologies and solutions to the next level. With over 150 locations in over 50 countries, Sierra is uniquely positioned to provide innovative products and lifetime support for the leading companies of today and the growth enterprises of tomorrow.

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