EMCO FLOW SYSTEMS

Sono-Trak™ Doppler

Ultrasonic Flow Meter

Engineered for performance excellence, the Sono-Trak™ Doppler ultrasonic flow meter combines non-invasive flow measurement with advanced ultrasonic technology. This easy-to-install and easy-to-program system provides the ideal solution for low-cost, reliable, and maintenance-free flow measurement of both clean and dirty fluids.

Benefits

Fast and easy installation—fits pipe sizes from 0.5 to 100"

Rugged and maintenance-free—no moving parts

Non-invasive flow measurement

Reliable and accurate flow readings—typically provides ±2.0% full-scale accuracy

Features

Automatic gain control—as flow profile changes so does the electronics signal

Noise immunity to variable frequency drive (VFD)

User-friendly, easy-to-program display with on-screen prompting and keyboard entry

Digital signal—allows for cable lengths up to 5000' (1524 m)

AC or DC operation

Fixed and portable units available

New Technology Flow Meter

The Sono-Trak™ Doppler flow meter is a non-invasive, ultrasonic flow metering system that eliminates mechanical wear, drift, and pressure drop problems associated with traditional technologies—making it an ideal choice for new installations and system retrofits. This flow metering solution is suitable for both clean fluids (where air bubbles are present) and dirty fluids (with > 2% of suspended solids) in most industrial applications.

Compatible and Reliable

Either wet-mounted internally or clamp-mounted to the outside of a pipe, the easy-to-install Sono-Trak Doppler flow meter fits pipe sizes from 0.5 to 100" (13 to 2540 mm) and accommodates a wide variety of pipe materials. In addition, it can sustain high-temperature, high-pressure, and volatile-vibration conditions.

With no moving parts to wear, recalibrate, or maintain, the Sono-Trak Doppler flow meter offers ±0.1% repeatability of full-scale flow. Non-contact fluid measurement not only allows installation during flow but eliminates chemical corrosion, caking, and risk of fluid contamination.

Advanced Ultrasonic Technology

The Sono-Trak Doppler flow meter uses advanced ultrasonic technology for higher-accuracy measurement. One transducer transmits a signal reflected from materials in the flow stream (particles, bubbles, or density differences); a second transmitter measures the frequency shift due to the motion of the reflective materials. The linear signal produced is proportional to the flow of the liquid.

Advanced digital signal processing translates the linear signal to a flow rate—typically delivering up to ±2.0% of full-scale accuracy.

Conductive fluid is not required to measure the flow rate; however, a minimum of 35 ppm of suspended solids or air bubbles of 40 microns must be present in the fluid. Also, the reflective material must have at least a 0.2% density difference from the liquid medium.

Data Collection Capabilities

A user-friendly display provides continuous, real-time flow rate, velocity, and totalization measurements in user-selectable engineering units. On-screen prompting and a full-function, 32-character, dual-line, alphanumeric keypad entry make programming effortless.

The display reads pulse, voltage, and analog rates, and it includes built-in hi/lo limit alarms, 4 to 20 mA signals, and an echo light to indicate whether the signal is producing accurate readings.

Other EMCO Products

The complete EMCO product line for liquid, gas, and steam applications includes industrial in-line vortex, industrial insertion vortex and turbine, commercial vortex, electromagnetic, and ultrasonic flow products. For more information, refer to the EMCO flow product guide on the EMCO website (*www.emcoflow.com*).

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