Endress+Hauser
People for Process Automation

Endress+Hauser expands ultrasonic clamp-on measurement with new FlowDC function

Burlington, ON – Tried-and-tested ultrasonic measuring technology with intelligent diagnostic functions has served the process sector well for decades. Now, Endress+Hauser's new Proline Prosonic Flow P 500 measuring system with world-first FlowDC functionality built in means this clamp-on measurement technology also can be employed with that same high reliability on constricted pipeline networks with minimal straight line inlet runs and disturbed flow.

The compact pipeline systems in process industries usually have numerous fittings such as pipe bends. Disturbed flow profiles occur downstream of such obstacles and can impair the accuracy of a flowmeter. Prosonic Flow P 500's unique FlowDC function detects and automatically compensates for effects of disturbances on the measuring signal via calculation. This makes it possible, for example, to maintain a consistent, specified accuracy even with a significant reduction in inlet runs – e.g. from 15 DN pipe diameters all the way down to 2 DN. This means maximum flexibility for operators wishing to equip or retrofit a plant with clamp-on flowmeters. They can install the Prosonic Flow P 500 wherever and whenever they want – independent of the pipeline design – and expect maximum performance even in confined spaces.

In contrast to mechanical meters, ultrasonic flowmeters have no moving parts. This non-intrusive measuring method with sensors mounted directly on the pipe enables safe measurement of corrosive, abrasive and toxic fluids – regardless of their properties, such as conductivity and pressure. The new generation Prosonic Flow P 500 is ideal for monitoring and controlling processes employing a wide variety of fluids such as chemicals, liquid hydrocarbons, solvents, acids, bases, water and more. A Prosonic Flow P 500 installation, with its Proline 500 transmitter, is capable of a wide range of applications, e.g. quantity and volume measurement, totalizing and balancing, process monitoring, verification of previously installed flowmeters and detection of leaks between two measuring points in a large pipeline. Prosonic Flow P 500 can simultaneously record multiple measured values for process control, such as volume flow, flow velocity and sound velocity, and forward them to a process control system.

The robust Prosonic Flow P 500 sensors can be mounted on a wide variety of pipeline types and materials: metal, plastic, GRP and composites. A special, maintenance-free contact foil provides optimum sound transmission between sensor surface and pipe, assuring a constantly high signal strength for stable measurement results and high performance year after year.

The robust, stainless steel, SIL-compliant Prosonic Flow P sensors are IP68 (Type 6P) rated for operations in harsh ambient conditions or safety-related applications and at process temperatures between –40 to +170 °C. Heartbeat Technology is another highlight. This testing function is integrated into all Endress+Hauser Proline measuring devices, enabling permanent self-diagnostics with the highest diagnostic coverage (>95%) as well as a traceable device verification without process interruption. Complete access to all measurement data, including diagnostic data acquired by Heartbeat Technology, is possible at any time thanks to digital data transmission via HART or Modbus RS485 as well as via WLAN or via the freely configurable inputs and outputs.

About Endress+Hauser

Endress+Hauser is a global leader in measurement instrumentation, services and solutions for industrial process engineering. Endress+Hauser provides sensors, instruments, systems and services for level, flow, pressure and temperature measurement as well as analytics and data acquisition. We work closely with the chemical, petrochemical, food & beverage, oil & gas, water & wastewater, power & energy, life science, primaries & metal, renewable energies, pulp & paper and shipbuilding industries. Endress+Hauser supports its customers in optimizing their processes in terms of reliability, safety, economic efficiency and environmental impact. The Group employs just over 14,000 personnel worldwide and generated consolidated sales of just under 2.6 billion euros in 2020.

Press Photo *(one image – see attachment)*

Caption: *Endress+Hauser's Proline Prosonic Flow P 500 – a Proline 500 transmitter (L) and Prosonic Flow P 500 clamp-on sensors (R) – introduces world-first Flow DC functionality for highly reliable ultrasonic flow measurement even on constrained pipeline networks.*

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