

# The pulse of your measurement

Endress+Hauser's Heartbeat Technology allows you to test flowmeters in water and wastewater applications easily without device disassembly

Heartbeat Technology helps plant owners/operators to meet the most important requirements of the water and wastewater industry and reduces the time and cost of inspection at the same time. The technology not only offers device diagnostics and verification but Heartbeat Monitoring also facilitates the early detection of process influences.

Technical quality management systems, particularly in the form of DIN EN ISO 9001, play an increasingly important role in the water sector. As part of the auditing process, proof is required that any measuring devices implemented and thus any flow measuring points are inspected on a regular basis. In the wastewater management sector, operators of sewage treatment plants place a high priority on the inspection of their measuring points. It serves to verify that the calculated quantities are correct and that the entire plant is operating reliably and in line with high quality standards. Furthermore, individual measuring points are subjected to rigorous regulatory requirements (EKVO, EÜV and other German regulations for monitoring wastewater systems).

## Alternative test method to recalibrations

Heartbeat Technology is a new function integrated into the Proline measuring electronics that, in addition to stable long-term measurement with the Promag 400, enables continuous diagnostics as well as comprehensive device verification. This makes it possible to fulfil the traceability requirements in the context of ISO 9001 without problems – where and when requested – since verification can be carried out at any time using any of the device interfaces. With Heartbeat Technology, devices can be verified without dismantling them and without interrupting the measurement. The inspection offers a high level of test coverage and includes the entire device, from the signal input (sensor) through to the electronics and output signal. Inspection reports are created via web server or asset management systems. This provides complete documentation of a measuring device's performance. Verification results are also automatically saved directly in the device.

## Diagnosis, verification and monitoring in the device

The new test concept has three core components. Heartbeat Diagnostics continuously monitors and tests diagnostic parameters against specified limit values. Process and device diagnostic messages are generated with clear instructions. Heartbeat Verification offers verification at the push of a button, i.e. a documented device test on request as confirmation of measuring device functionality. The measuring point is clearly and reliably assessed and documented as having passed/failed. Heartbeat Monitoring is used to output selected diagnostic parameters for evaluating and logging as part of "preventive maintenance". Plant owners/operators can identify changes (trends), systematic errors or process influences at an early stage.

**Graphic 1**



Promag 400 – The water specialist with integrated Heartbeat Technology.

## The E+H Group

Endress+Hauser is a leading international supplier of measuring devices, services and solutions for industrial process engineering. The company group has more than 13,000 employees worldwide. In 2015 it generated net sales of EUR 2.1 billion.

## Structure

Professional support is guaranteed worldwide through its own Sales Centers and a network of partners. With product centers in eleven countries, E+H is fast and flexible in meeting the needs of its customers. A holding company in Reinach/Switzerland manages and coordinates the company group. As a successful, family-run business, Endress+Hauser plans to remain an independent, unaffiliated company into the future.

## Products

Endress+Hauser supplies sensors, devices, systems and services for level, flow, pressure and temperature measurement, as well as analysis and measured value recording. The company supports its customers with services and solutions in the area of automation engineering, logistics and IT. The products set standards in terms of quality and technology.

## Industries

Customers are primarily from the chemical/petrochemical, food, oil and gas, water/wastewater, energy and power plant, life science, metal and primaries, renewable energy, paper and pulp and shipbuilding industries. With support from Endress+Hauser, they are able to implement reliable, safe, efficient and environmentally friendly process-engineering procedures.

## History

Endress+Hauser was founded in 1953 by Georg H. Endress and Ludwig Hauser. The Endress+Hauser Group has been exclusively owned by the Endress family since 1975. The company has developed from being a specialist in level measurement to a provider of complete solutions for industrial measurement technology and automation. During this time, it has consistently developed new markets.

Further information is available at [www.de.endress.com](http://www.de.endress.com), [www.at.endress.com](http://www.at.endress.com) or [www.ch.endress.com](http://www.ch.endress.com)

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