Endress+Hauser
People for Process Automation

Proline 300/500 flowmeter family – ready for the IIoT

Ready for the digital future – new features – simple operation

The new Proline 300/500 line of measurement instruments represents industry-optimized flow measurement technology with an extended field of application and improved performance. With WiFi capability and additional retrievable instrument and process diagnostic parameters, the measurement point is equipped for the future, providing a high degree of process and product safety. Other valuable features include HistoROM data management and Heartbeat Technology.

Digitalization-ready
The smart sensor characteristics specified in the NAMUR roadmap illustrate which criteria measurement instruments must fulfill to be ready for the IIoT. The new Proline 300 satisfies these criteria in every respect. As well as digital connectivity via conventional fieldbuses such as PROFIBUS, DP/PA, FOUNDATION, Modbus or HART/WirelessHART, the new device also enables Ethernet communication via PROFINET, EtherNet/IP and WiFi. The multiparameter sensors, such as Promass and Promag, generate not only the flow measurement values but also an entire range of additional process parameters and extensive instrument and process diagnostic data.

Superior process and product safety
The integrated industry safety concepts guarantee process and product safety for specific industries. The instruments are developed in line with IEC 61508. The integrated SIL concept helps avoid systematic errors and ensures safe and simple commissioning and repeat tests for measurement points installed in safety instrumented process control systems. The duration of the proven-in-use period is shortened (6 months instead of 1 year) and need not be renewed when software updates are applied. Systematic errors are avoided during the entire life cycle, which allows operators to efficiently and safely plan, commission, test and maintain SIL systems.

Robust and extremely stable sensor technology, including a proven-in-use hygienic design, takes into account the demands of the hygienic process. This includes sealing concepts with tested geometry and suitable gasket materials that prevent recontamination of the medium, such as after the cleaning process. The hygienic design is 3A-compliant and EHEDG-certified. In addition, the instruments fulfill important food contact material requirements (VO 1935 und VO 10_2011), thus making an important contribution to product safety.

Taking the pulse of your measurement
The integrated, continuously operating self-test enables permanent testing of the flow measurement instrument directly in the pipe. All of the Heartbeat diagnostic, verification and monitoring tests are compared to the fixed reference parameters in the device and then automatically stored. The instrument can store up to eight consecutive tests. With Heartbeat Technology, the diagnostic data is processed within the instrument and can be transferred to a mass data storage device for data mining or data analysis purposes.

Another noteworthy feature of the monitoring function is the processing of the HBSI (Heartbeat sensor integrity) parameter, which for the first time makes it possible to provide concrete information regarding the so-called worklist of the instrument in applications where corrosion, abrasion and deposit build-up occurs, thus making genuine predictive maintenance a reality.

No more lost data
The HistoROM data storage concept secures the data, provides transparent measurement operation and avoids having to reconfigure the parameters after swapping out a component. HistoROM Backup is a hardware-based data storage component connected to the housing of the instrument that ensures the data is never lost. In a new feature, the HistoROM Backup now contains the firmware, thus ensuring that all components and replacement parts are always in sync with the current firmware version to avoid incompatibilities. The factory settings are also stored in the HistoROM Backup so that the instrument can be quickly restored to its original delivery condition.

HistoROM T-DAT is a transmitter storage component connected to the instrument in which all of the parameter data is automatically stored directly after configuration. It can also be used to easily load a backup of the most recent settings. This makes it easy to restore the most recent configuration when carrying out changes. T-DAT also stores all relevant data while the process is running, including accumulated meter readings and drag pointers for minimum and maximum values. The measurement point data can be quickly and easily transferred by reconnecting the T-DAT to the replacement instrument.

Simplicity through details
The new Proline has also been improved with small but well-thought-out features. Installation has been simplified thanks to front-side access, plug-in terminals, a removable display and a wide-range power supply. Four LEDs signal the most important status conditions, plus a configurable I/O module and diverse communication interfaces allow the new instruments to be integrated into nearly any environment.

As well as an integrated web server that streamlines commissioning, establishing the connection is simple, even via the wireless interface. All that is required is to register the instrument with the serial number and device name using a mobile device and any commercially available browser. If errors do occur during operation, they are categorized in accordance with NE107 and listed in the event log book, thus allowing them to be specifically resolved and avoid downtime.

EH_Proline300_500.jpg
Proline 300/500: flow measurement technology that is ready for the future.

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The Endress+Hauser Group

Endress+Hauser is a global leader in measurement instrumentation, services and solutions for industrial process engineering. The Group employs approximately 14,000 personnel across the globe, generating net sales of over 2.4 billion euros in 2018.

Structure
With dedicated sales centers and a strong network of partners, Endress+Hauser guarantees competent worldwide support. Our production centers in 12 countries meet customers' needs and requirements quickly and effectively. The Group is managed and coordinated by a holding company in Reinach, Switzerland. As a successful family-owned business, Endress+Hauser is set for continued independence and self-reliance.

Products
Endress+Hauser provides sensors, instruments, systems and services for level, flow, pressure and temperature measurement as well as analytics and data acquisition. The company supports customers with automation engineering, logistics and IT services and solutions. Our products set standards in quality and technology.

Industries
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.

History
Founded in 1953 by Georg H Endress and Ludwig Hauser, Endress+Hauser has been solely owned by the Endress family since 1975. The Group has developed from a specialist in level measurement to a provider of complete solutions for industrial measuring technology and automation, with constant expansion into new territories and markets.

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