Improving process visibility and efficiency with IO-Link-enabled Coriolis flowmeters

Proline Promass K 10 combines multivariable measurement and digital communication to enhance visibility diagnostics and integration

Benefits at a glance

- Move from basic analog signals to rich, accessible digital data
- Simplify integration with standardized IO-Link communication
- Reduce engineering effort and speed up commissioning
- Improve troubleshooting with standardized diagnostics (NAMUR NE107)
- Enable predictive maintenance with continuous diagnostics and device data
- Enhance process visibility for optimization and analytics
- Lower total cost of ownership through simplified lifecycle management

Summary As the need for accessible data and connectivity has increased, IO-Link has evolved from a sensor-level communication protocol into a broader standard for process instrumentation. Today, many systems may still rely solely on 4–20 mA signals, which provide only a single process value while leaving valuable diagnostic and condition data unused. This can create challenges in detecting deviations early, troubleshooting efficiently and optimizing performance.

Endress+Hauser's Proline Promass K 10 Coriolis flowmeter with IO-Link addresses these limitations by combining accurate multivariable measurement with a simple, digital

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communication interface. By delivering process data, diagnostics and device information through a single, easy-to-integrate connection, it supports a transition from basic measurement to data-rich process insight.

Challenge Maintaining process efficiency and reliability becomes increasingly challenging when instrumentation provides only limited insight. Many facilities still depend on traditional analog signals, which restrict information to a single measured value which may leave crucial diagnostics inaccessible. As a result, operators can struggle to identify deviations early and assess device condition effectively.

Integration challenges can further increase system complexity. Traditional setups often require multiple instruments to measure parameters such as flow, density and temperature. This increases engineering effort, introduces inconsistent integration approaches and complicates system design as measurement points expand.

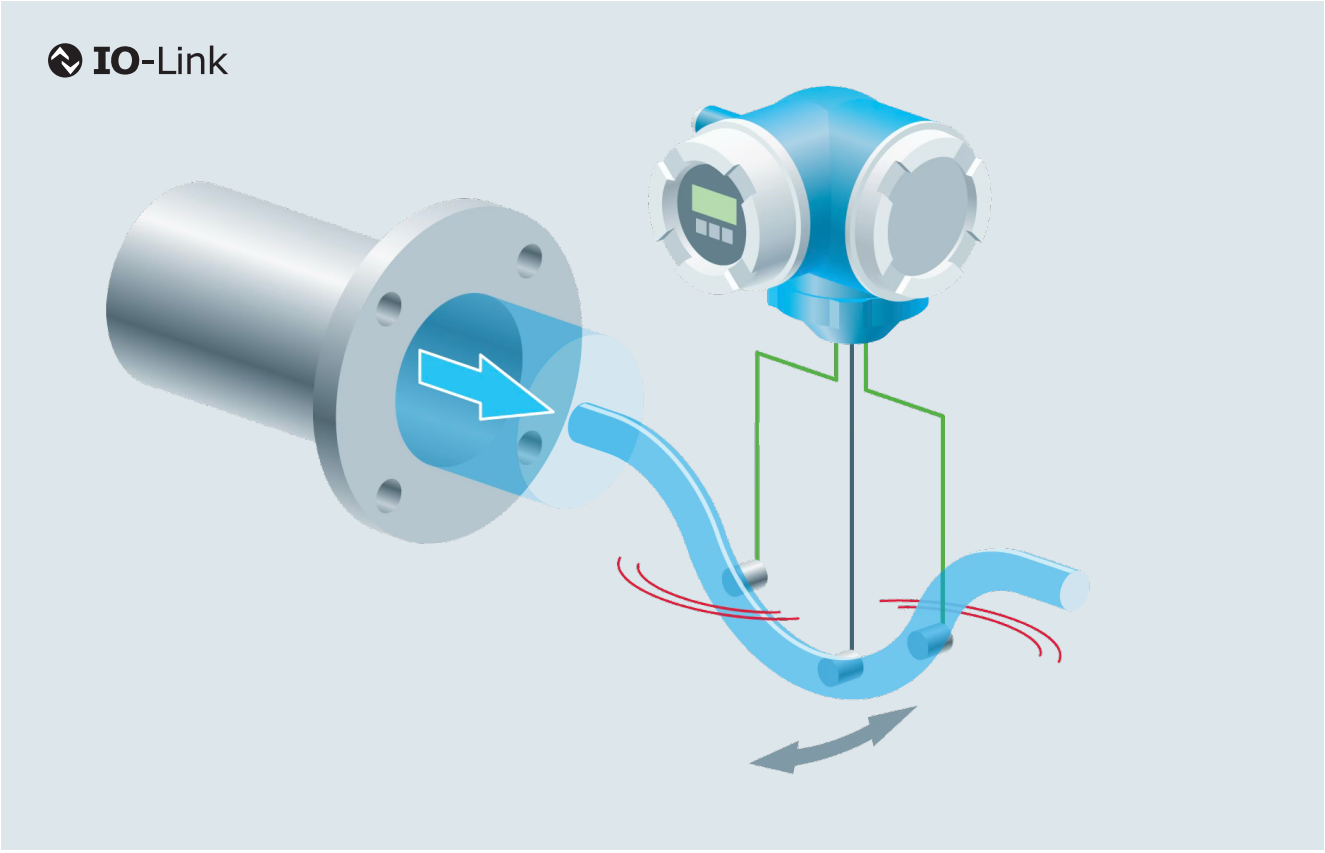
Maintenance and troubleshooting are also less efficient without consistent diagnostic information. When issues occur, determining whether the root cause lies in the process or the instrument can be time-consuming. This delays resolution and makes predictive maintenance strategies harder to implement.

At the same time, industries face growing pressure to digitalize operations, requiring accessible data, seamless connectivity and integration with automation platforms without adding unnecessary complexity.

Solution IO-Link and Proline Promass K 10 provide a combined remedy that increases data accessibility while simplifying system integration. IO-Link serves as a digital communication layer between field devices and control systems. Different than analog signals, it enables bidirectional communication, allowing continuous transmission of process values, diagnostics and device information. It also supports remote configuration and unified communication across devices, improving consistency and integration efficiency.

Engineering and installation are simplified through point-to-point connections and unshielded cables, reducing wiring effort and setup time. This provides faster commissioning, easier PLC integration and a better streamlined system design. Diagnostics follow NAMUR NE107 standards, delivering clear status indications and event notifications. This improves visibility into device condition and allows faster troubleshooting and more informed maintenance decisions.

Proline Promass K 10 combines these advantages with advanced Coriolis technology. It measures mass flow, density and temperature simultaneously, eliminating the need for multiple instruments. As Endress+Hauser's first Coriolis



flowmeter with IO-Link integration, it creates a practical path for bringing high-performance measurement into digital environments.

In addition, the device supports simple parameterization via IO-Link or SmartBlue, leading to quick configuration and easy access to device settings. Its hygienic design and broad application range make it suitable for various industries and provide a straightforward way to integrate advanced flow measurement into modern digital systems.

Results With Proline Promass K 10 and IO-Link, users gain immediate access to in-depth data and more efficient workflows. Standardized connectivity and simplified setup reduce engineering effort and accelerate commissioning, helping projects move from installation to operation more quickly.

Improved diagnostics enable faster and more accurate troubleshooting. With clear status information and continuous device data, users can more easily distinguish between process-related and instrument-related problems, reducing downtime and improving maintenance response. Operational flexibility is enhanced through configurable devices and standardized integration. This reduces the number of variants required, simplifies spare parts management and allows easier device replacement through stored parameters and consistent interfaces. Access to multivariable measurement data and diagnostics supports deeper process insight. This information can be used for advanced analytics, optimization and improved decision-making, helping facilities operate more efficiently overall.

By simplifying installation, reducing maintenance effort and improving system transparency, the Promass K 10 helps lower total cost of ownership. Its ease of integration ensures that advanced digital capabilities can be implemented without increasing system complexity.

Learn more about Proline Promass K 10

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