## Proline 10

## Flow measurement uncompromisingly simple

## Ideally suited for basic applications in all industries

- Clearly arranged Auto-rotatable, high-contrast LCD display for reliable reading of measured values and status messages
- Flexible SmartBlue app for wireless remote access to all device and parameter settings as well as wizards
- Intuitive Touch screen for easy navigation using common gestures
- Time-saving Reliable and error-free commissioning thanks to wizard-guided menu
- Secure Automatic display of errors (NAMUR NE107) and remedy information
- Economical Multifunctional flow measurement with simultaneously low total cost of ownership and minimal maintenance
- Reliable Heartbeat Technology with diagnostics, monitoring and verification functions
- Proven in use Over 3 million
   Promag and Promass sensors
   successfully installed since 1977



## Focus on simplicity

#### Your benefits at a glance

#### Simply intuitive

- High-contrast LCD display with touch screen
- Reliable readouts in every mounting position thanks to auto-rotatable display
- Easy operation using common gestures (even while wearing gloves)
- Over 17 operating languages available

#### Simply reliable (Heartbeat Technology)

- High plant availability thanks to self-diagnostics, monitoring and verification functions
- Assured compliance with legal regulations through device verification without process interruption
- Clear and unmistakable timestamps thanks to realtime clock

#### 3 Simple commissioning

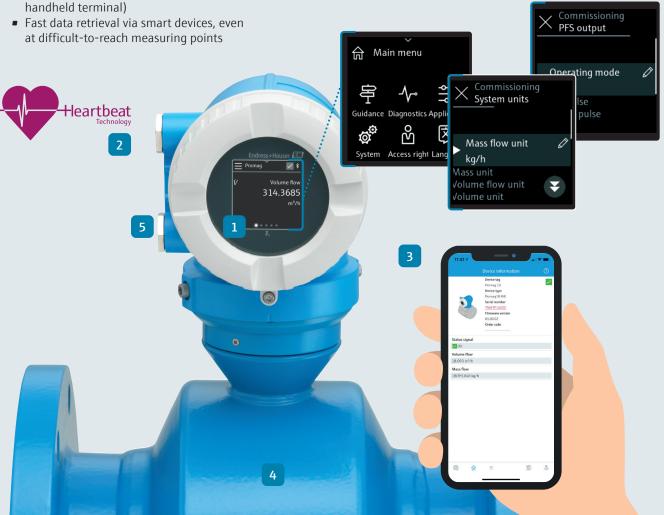
 Convenient configuration and parameterization using commissioning wizard via display, SmartBlue app or operating tools (e.g. FieldCare, DeviceCare or HART handheld terminal)

#### 4 Simply clever

- Optimum product quality and process monitoring thanks to simultaneous measurement of additional process variables: Conductivity, temperature, mass flow, density, etc. (depending on the measuring principle, sensor and selected order options)
- Automatic display of errors in case of malfunction (NAMUR NE107) and of remedy information for error-free operation

#### 5 Simple to connect

- Seamless system integration via HART or Modbus RS485
- Maximum flexibility: Wide-range power supply unit for different rated voltages and for AC or DC





Various Proline 10 transmitter variants (left to right): with LED display, with LCD display with/without touch screen, without display.

## **Profit from Proline 10**

#### From commissioning to process control

For over 40 years, Endress+Hauser has been providing its customers with one of the most comprehensive flow measurement product portfolios for liquids, gases and steam. During this time, our customers have successfully installed over 3 million Promag and Promass flowmeters in a wide variety of industrial areas. Since process plants sometimes include hundreds or even thousands of measuring devices, recent years have seen considerably greater demand for these devices to offer simplicity in commissioning, measuring and maintenance.

Proline 10 meets precisely this requirement without compromise, because simplicity is the top priority for this

new flowmeter line from Endress+Hauser – regardless of whether you want to commission the device, set device parameters, monitor the process or initiate targeted trouble-shooting measures.

**Your benefits:** Saving time and money over the entire life cycle. And all this without any limitation on measuring performance, because every device is tested on accredited and traceable calibration rigs (ISO/IEC 17025). Proline 10 is simplicity, safety and reliability in one. Find out for yourself!



You can find more information about Proline 10 on our website – movie, e-book, articles, etc.

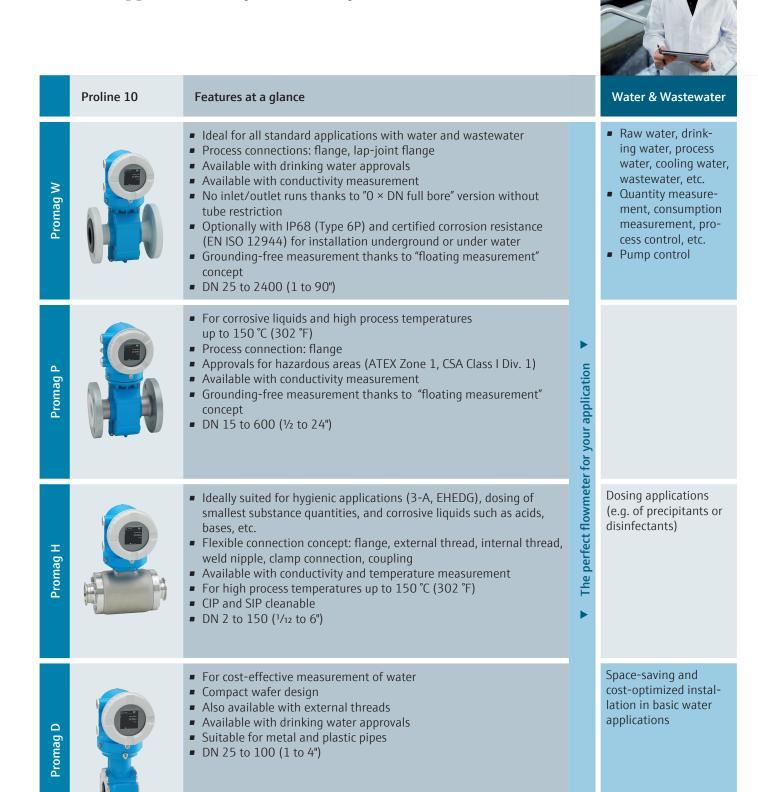
www.endress.com/proline-10

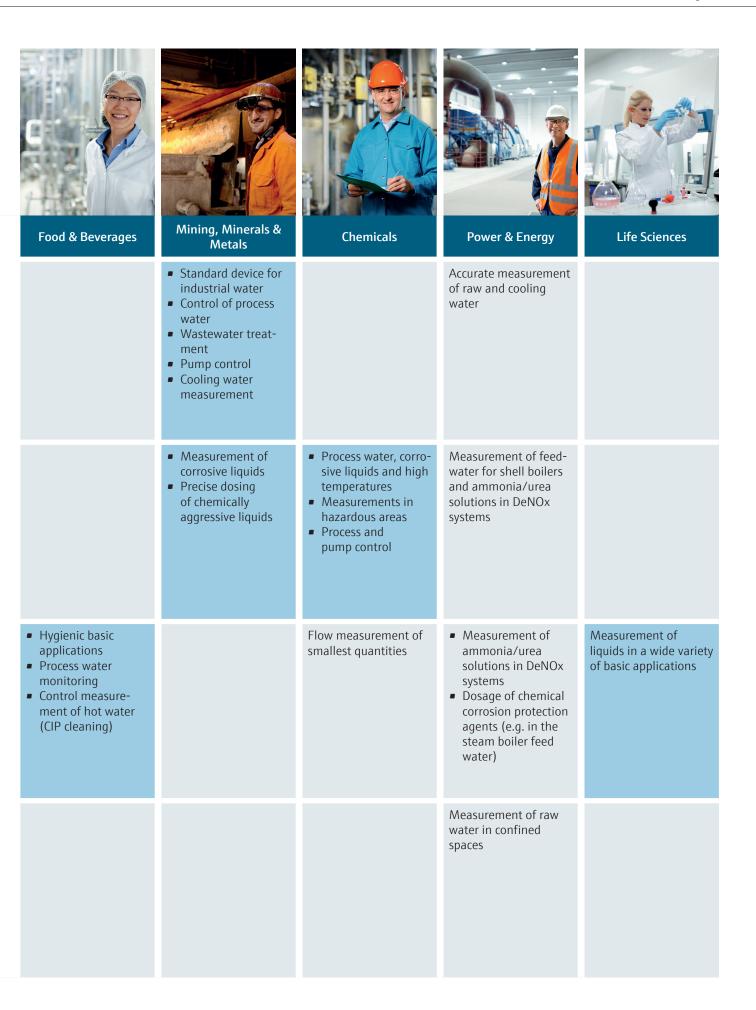


Download your E-Book Proline 10 with all information at a glance.

## Promag sensors

The perfect electromagnetic flowmeter for basic applications in your industry





### **Promass sensor**

#### The perfect Coriolis flowmeter for your utilities

#### **Promass K**



- Flowmeter for liquids and gases with minimal operating costs
- Reliable measurements even of inhomogenous liquids with entrained gas thanks to one-of-a-kind Gas Fraction Handler (GFH) function
- Simultaneous measurement of mass flow, volume flow, temperature and density (optional)
- Process connections: flange, tri-clamp
- For process temperatures up to 150 °C (302 °F)
- No inlet/outlet runs
- Approvals for hazardous areas (ATEX Zone 1, CSA Class I Div. 1, GP)
- Approvals for the food industry (EC 1935, FDA)
- DN 8 to 80 (3/8 to 3")



Chemicals



Food & Beverages



Oil & Gas



Life Sciences

#### **Basic applications**

Measurement of all conductive and non-conductive liquids:

- Acids and alkalis
- Cleaning agents and solvents
- Liquid hydrocarbons (e.g. benzene, toluene)

#### Replacement of maintenance-intensive devices (MRO)

- Of mechanical devices, e.g. variable area flowmeters
- Of volumetric devices

#### **Process control**

For filling tanks and batch reactors

## **Dosing measurements** (examples)

- Measurement of carbon dioxide (CO<sub>2</sub>) for carbonization of soft drinks
- Measurement of the required admixture quantity of animal fats (e.g. butter) or other substances

#### **Process control**

Measurement of admixed substances (oils, nutrients, aromatic substances) in silos or feed mills

#### Filling Pump control

Measurement of the amount of fuel refueled or filled in tank trucks or rail tank cars

## Consumption measurements

Fuel consumption, e.g. for operating combustion engines

#### **Process control**

- Flow measurement of liquid hydrocarbons in refineries
- Flow measurement in distribution networks (submetering)

#### Regasification

Measurement of purified water for injection purposes (WFI) in skids

## Preparation of purified water

Quantity measurement when distributing buffer solutions in downstream processes

## Technical data

#### Proline 10 transmitter

Display	<ul> <li>Option 1: Without display (blind version)</li> <li>Option 2: Display with two LEDs (device status, Bluetooth on/off)</li> <li>Option 3: LCD display (auto-rotatable depending on mounting position)</li> <li>Option 4: LCD display with touch screen (auto-rotatable depending on mounting position)</li> </ul>
Operation	<ul> <li>Via fieldbus protocol (HART, Modbus RS485)</li> <li>Via local display (touch screen)</li> <li>Via SmartBlue app (smartphone, tablet, etc.)</li> <li>Via operating tools (FieldCare, HART handheld terminal, etc.)</li> </ul>
Material	Aluminum, polycarbonate
Design	Compact version or remote version (for Promag only)
Power supply	<ul> <li>AC 100 to 230 V (50/60 Hz)</li> <li>DC 24 V (50/60 Hz)</li> <li>AC 100 to 230 V (50/60 Hz) / DC 24 V (50/60 Hz)</li> </ul>
Ambient temperature	−40 to +60 °C (−40 to +140 °F)
Degree of protection	IP66/67 (Type 4X enclosure)
Inputs/outputs/communication	<ul><li>Option 1: 4 to 20 mA (HART) and pulse/frequency/switch output</li><li>Option 2: Modbus RS485 and 4 to 20 mA</li></ul>
Approvals	Available depending on sensor version (e.g. for drinking water, hazardous areas or hygienic applications in the food industry)
	Subject to modific

The Proline Promag 10/Promass 10 measuring system fulfills the EMC requirements according to IEC/EN 61326 and NAMUR NE21. It also conforms to the requirements of the EU and ACMA directives and thus carries the  $\mathbf{C}\mathbf{C}$  and the  $\mathbf{C}\mathbf{C}$  mark.

# Proline simply clever

Although requirements for process monitoring are becoming more complex, the need for simple device operation, commissioning and maintenance is steadily increasing. This is why Endress+Hauser provides industry-specific flow measurement solutions optimized for

future technology requirements. The new generation of our Proline flowmeters is based on a uniform device and operating concept. This means time and cost savings, as well as maximum safety over the entire plant life cycle.



#### **Heartbeat Technology**

For permanent self-monitoring, diagnostics and device verification



#### W@M Life Cycle Management

Open information system for device documentation and management



#### Simple operation (HMI)

Intuitive on-site operation via touch screen or SmartBlue app



#### Seamless system integration

Direct and transparent through digital communication



#### HistoROM

Automatic data storage and data restoration

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Eco-friendly produced and printed on paper from sustainable forestry.