



Proline 10

Flow measurement uncompromisingly simple

Tap/click to navigate



Transmitters Proline 10

Simplicity in focus

Options

Tap/click to navigate

Depending on customer needs or application, Proline 10 is available with different display modules and operating options:

1 Option 1

- Without display (blind version)
- Operation/data access: via HART, Modbus RS485 or IO-Link

2 Option 2

- Display with two LEDs (device status, Bluetooth off/on)
- Operation/data access:
 - Via SmartBlue app (Bluetooth)
 - Via HART, Modbus RS485 or IO-Link

3 Option 3

- LC display
- Operation/data access:
 - Via SmartBlue app (Bluetooth)
 - Via HART, Modbus RS485 or IO-Link

4 Option 4

- LC display with touch screen
- Operation/data access:
 - Via SmartBlue app (Bluetooth)
 - Via touch screen on site
 - Via HART or Modbus RS485



[Proline 10 – Flow measurement uncompromisingly simple](#)

Transmitters Proline 10

Simplicity in focus

Technical data

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Proline Promag 10 / Proline Promass 10

Display	<ul style="list-style-type: none"> Option 1: Without display (blind version) Option 2: Display with two LEDs (device status, Bluetooth off/on) <p>* auto-rotatable depending on mounting position</p>	<ul style="list-style-type: none"> Option 3: LC display* Option 4: LC display* with touch screen
Operation	<ul style="list-style-type: none"> Via fieldbus protocol (Modbus RS485, HART, IO-Link) Via local display (touch screen) 	<ul style="list-style-type: none"> Via SmartBlue app (smartphone, tablet, etc.) Via operating tools (FieldCare, HART handheld terminal, etc.)
Housing material	Aluminum or polycarbonate	
Design	Compact version or remote version (for Promag only)	
Power supply	<ul style="list-style-type: none"> AC 100 to 230 V (50/60 Hz) DC 24 V (50/60 Hz) 	<ul style="list-style-type: none"> AC 100 to 230 V (50/60 Hz) / DC 24 V (50/60 Hz) IO-Link port class A
Ambient temperature	-40 to +60 °C (-40 to +140 °F)	
Degree of protection	IP66/67 (Type 4X enclosure)	
Outputs/Inputs Communication	<ul style="list-style-type: none"> Option 1: 4–20 mA (HART) and pulse/frequency/switch output 	<ul style="list-style-type: none"> Option 2: Modbus RS485 and 4–20 mA Option 3: IO-Link
Approvals	Available depending on sensor version (e.g., for drinking water, hazardous areas or hygienic applications in the food industry, etc.)	

Subject to modification



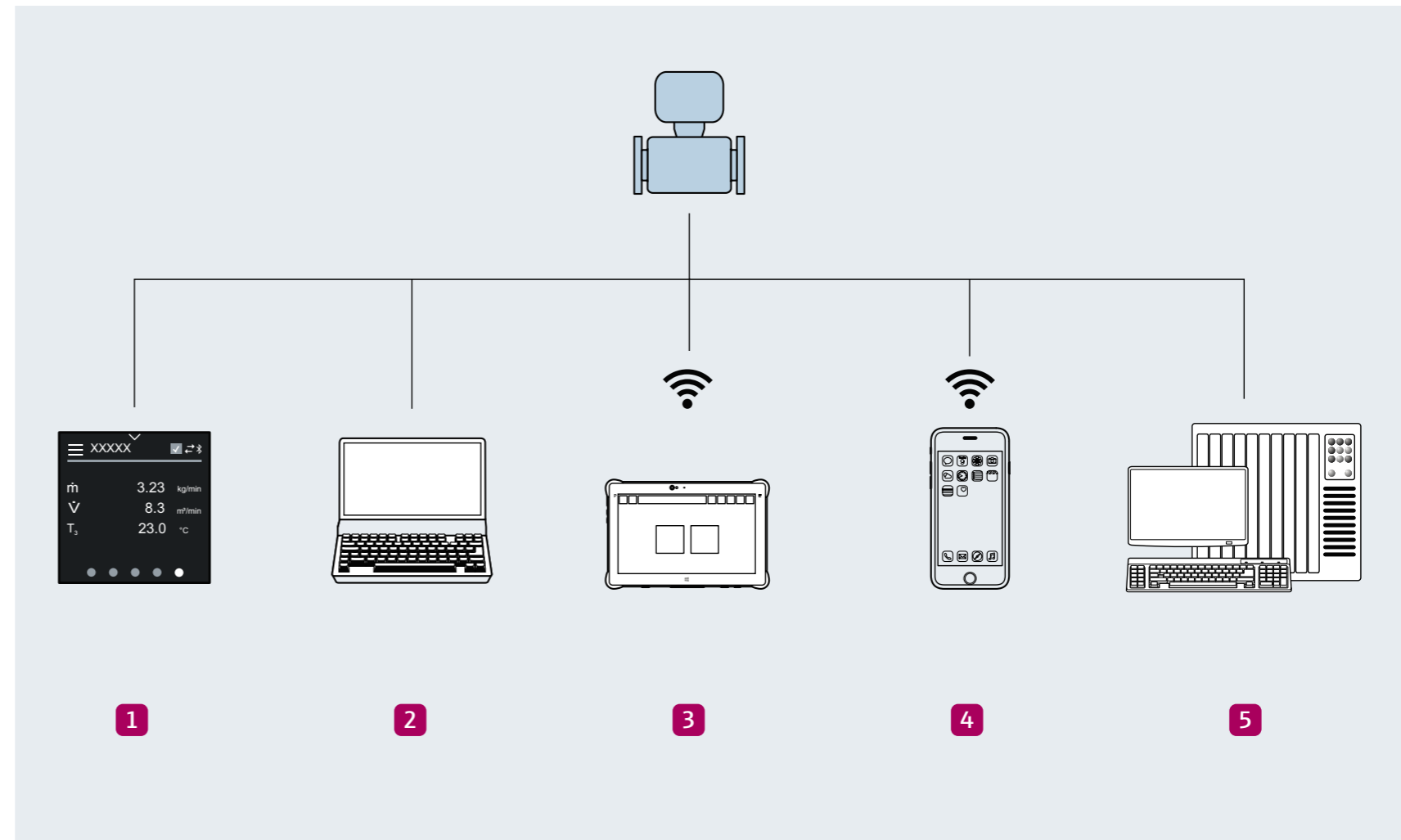
Operation

Simply flexible, intuitive and time-saving

Operation possibilities

Tap/click to navigate

- 1 Local operation via **touch screen**
- 2 Computer with **operating tool**
(e.g., FieldCare, DeviceCare, AMS Device Manager, SIMATIC PDM)
- 3 **Field Xpert SMT70** via Bluetooth or Commubox FXA291
- 4 **Tablet or smartphone** via Bluetooth, e.g., SmartBlue app
- 5 **Control system** (e.g., PLC), via HART, Modbus RS485 or IO-Link

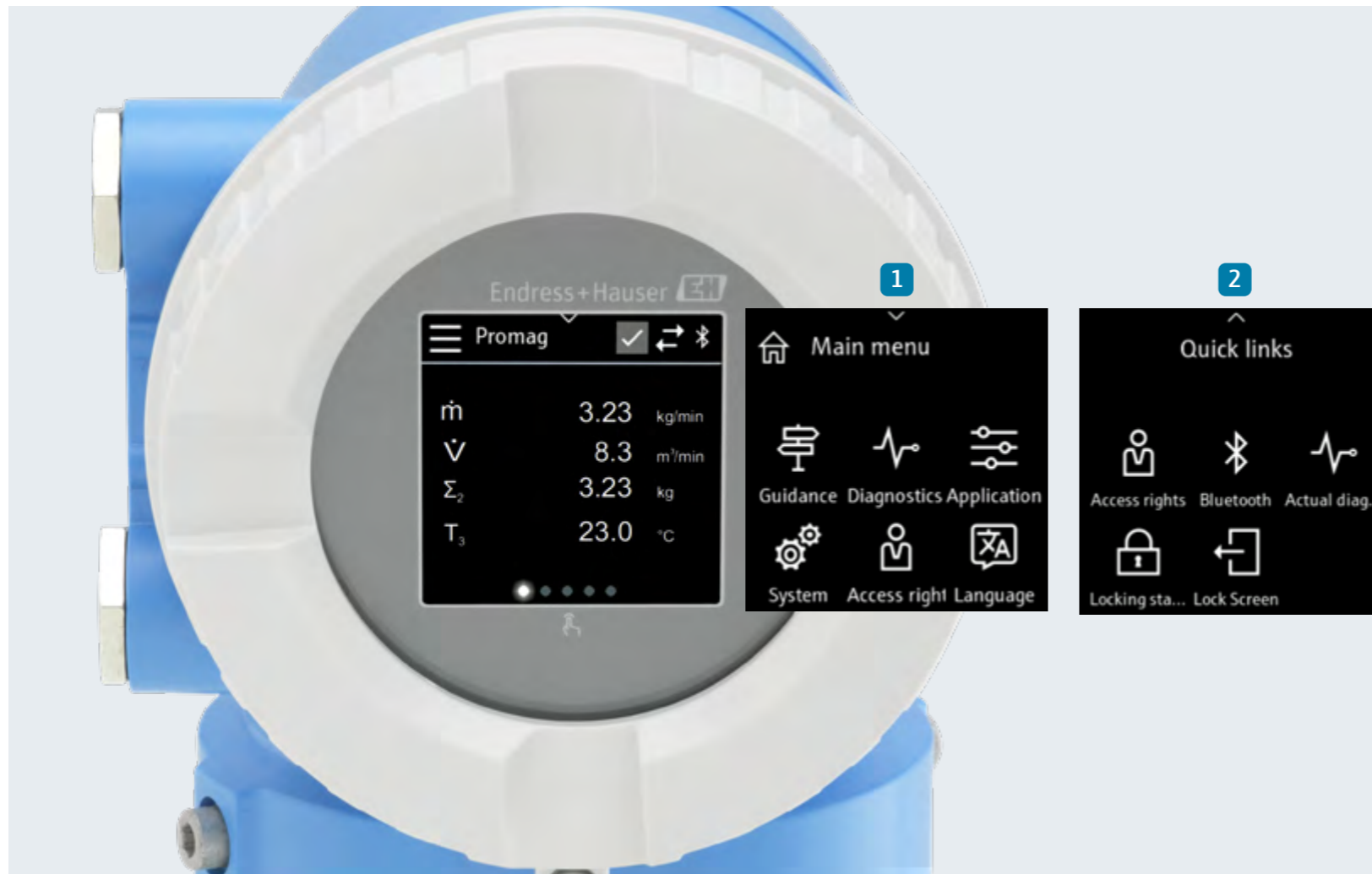


Operation

Simply flexible, intuitive and time-saving

Touch screen (1)

Tap/click to navigate



The display with its optional touch screen allows Proline 10 flowmeters to be operated quickly and easily. Since the display automatically aligns itself depending on the mounting position, measured values and status messages can be read without difficulties.

1 Main menu

Menus for commissioning, configuration or device operation

2 Quick links

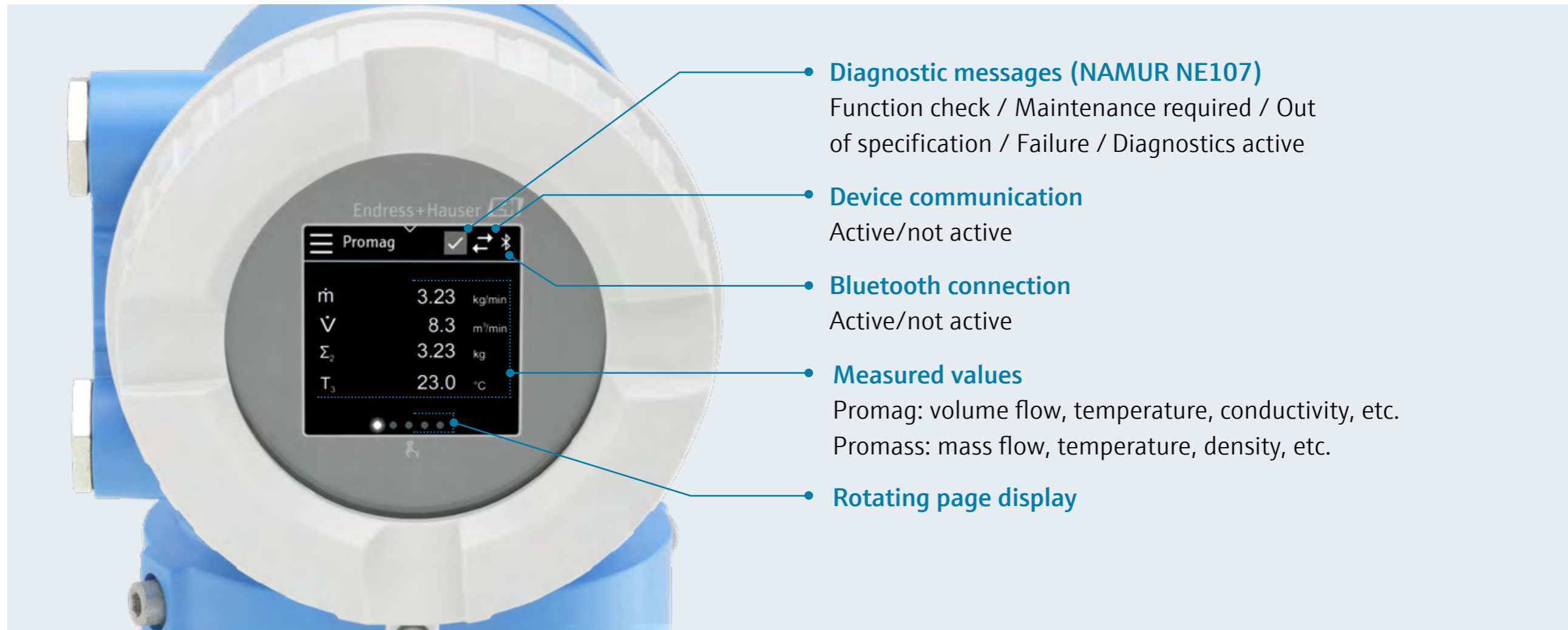
Menus for specific device functions (Bluetooth, diagnostic messages, write protection, etc.)

Operation

Simply flexible, intuitive and time-saving

Touch screen (2)

Tap/click to navigate




Operation

Simply flexible, intuitive and time-saving

SmartBlue app

Tap/click to navigate



The image shows a hand holding a smartphone displaying the SmartBlue app interface. The app screen shows 'Device information' for a Promag 10 flowmeter. The device information includes: Device tag (Promag 10), Device type (Promag 10 M0), Serial number (79A7F310000), Firmware version (01.00.02), and Order code. Below this, the 'Status signal' is shown as 'OK'. The 'Volume flow' is 18.093 m³/h and the 'Mass flow' is 18093.048 kg/h. In the background, the Promag 10 flowmeter is visible, showing its own display with 'Endress+Hauser' and 'Promag' branding, and a menu with 'm', 'V', 'Σ', and 'T' options. The flowmeter display shows values: 3, 8, 3.23, and 23.0 °C.

For easy commissioning and data retrieval in the field

The SmartBlue app allows for complete and individual device on-site configuration as well as comprehensive data access and download. The connection is established via Bluetooth.

- Menu-guided, time-saving commissioning via wizards
- Simple and fast navigation through device and diagnostic functions
- Wireless configuration/data retrieval:
 - Configuration of display, outputs, flow direction, units, etc.
 - Requesting diagnostic messages, etc.
- Range: up to 20 meters (66 ft)
- Available for Android and iOS

Sensors

The perfect flowmeter for your applications

Promag W

Tap/click to navigate



Promag W

For standard applications with water and wastewater

- Available with drinking water approvals
- Available with conductivity measurement
- Process connections: flange, lap-joint flange
- No inlet/outlet runs thanks to "0 × DN full bore" version without tube restriction
- Optionally with IP68 (Type 6P) and certified corrosion resistance (EN ISO 12944) for installation underground or under water
- Grounding-free measurement thanks to "floating measurement" concept
- Measuring accuracy: $\pm 0.5\%$ of reading
- DN 25 to 2400 (1 to 90")



[Measuring principle](#)



[Promag W
No inlet runs \(0 × DN full bore\)](#)

Sensors

The perfect flowmeter for your applications

Promag P

Tap/click to navigate



Promag P

For basic applications in the process industry

- For corrosive liquids and high process temperatures up to 150 °C (302 °F)
- Process connections: flange, lap-joint flange
- Approvals for hazardous areas (ATEX Zone 1, CSA Class I, Division 1, GP)
- Available with conductivity measurement
- Grounding-free measurement thanks to "floating measurement" concept
- Measuring accuracy: $\pm 0.5\%$ of reading
- DN 15 to 600 (1/2 to 24")



[Measuring principle](#)

Sensors

The perfect flowmeter for your applications

Promag H

Tap/click to navigate



Promag H

For hygienic applications

- Hygienic design according to 3-A and EHEDG
- For dosing the smallest substance quantities
- Ideal for corrosive liquids, e.g., acids, alkalis, etc.
- Flexible connection concept: flange, external thread, internal thread, weld nipple, clamp connection, coupling
- Available with conductivity and temperature measurement
- For high process temperatures up to 150 °C (302 °F)
- Measuring accuracy: $\pm 0.5\%$ of reading
- CIP and SIP cleanable
- DN 2 to 150 (1/12 to 6")
- Easy and efficient integration via IO-Link



[Measuring principle](#)

Sensors

The perfect flowmeter for your applications

Promag D

Tap/click to navigate



Promag D

Wafer device for low cost measurement of water

- Also available with external threads
- Available with drinking water approvals
- Suitable for metal and plastic pipes
- Measuring accuracy: $\pm 0.5\%$ of reading
- DN 25 to 100 (1 to 4")



[Measuring principle](#)

Sensors

The perfect flowmeter for your applications

Promass K

Tap/click to navigate



Promass K

For the measurement of liquids and gases with minimal operating costs

- Simultaneous measurement of mass flow, volume flow, temperature and density (optional)
- Reliable measurements even of inhomogeneous liquids with entrained gas thanks to one-of-a-kind Gas Fraction Handler (GFH) function
- 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, Division 1, GP)
- Measuring accuracy: $\pm 0.5\%$ of reading (optional: $\pm 0.2\%$, $\pm 0.15\%$)
- DN 8 to 80 ($\frac{3}{8}$ to 3")
- Easy and efficient integration via IO-Link



[Measuring principle](#)

Application areas and examples – Promag

Proline 10 – suitable for many industries

Promag W

Tap/click to navigate

Water & Wastewater

- Raw water, drinking water, process water, cooling water, wastewater, etc.
- Quantity measurement, consumption measurement, process control, etc.
- Pump control

Mining, Minerals & Metals

- Standard device for industrial water
- Control of process water
- Wastewater treatment
- Pump control
- Cooling water measurement

Power & Energy

- Accurate measurement of raw and cooling water



Application areas and examples – Promag

Proline 10 – suitable for many industries

Promag P

Tap/click to navigate

Mining, Minerals & Metals

- Measurement of corrosive liquids
- Precise dosing of chemically aggressive liquids

Chemicals

- Measurement of process water and corrosive liquids even at high temperatures
- Measurements in hazardous areas
- Process and pump control

Power & Energy

- Measuring feed water for large-scale steam boilers and liquid ammonia in catalytic gas cleaning systems



Application areas and examples – Promag

Proline 10 – suitable for many industries

Promag H

Tap/click to navigate

Food & Beverages

- Hygienic basic applications
- Process water monitoring
- Control measurement of hot water (CIP cleaning)

Life Sciences

- Measurement of liquids in a wide variety of basic applications

Chemicals

- Flow measurement of the smallest substance quantities

Power & Energy

- Measuring feed water and liquid ammonia in catalytic gas cleaning systems
- Dosage of chemical corrosion protection agents (e.g., into the steam boiler feed water)

Water & Wastewater

- For dosing applications, e.g., of precipitants or disinfectants



Application areas and examples – Promag

Proline 10 – suitable for many industries

Promag D

Tap/click to navigate

Water & Wastewater

- Space-saving and cost-optimized installation in basic water applications



Power & Energy

- Measurement of raw water in confined spaces



Application areas and examples – Promass K

Proline 10 – suitable for many industries

Chemicals

Tap/click to navigate

Chemicals

Basic applications

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

Process control

Measurement of the quantity to be filled into tanks or batch reactors



Application areas and examples – Promass K

Proline 10 – suitable for many industries

Food & Beverages

Tap/click to navigate

Food & Beverages

Dosing measurements (examples)

- Measurement of carbon dioxide (CO₂) 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



Application areas and examples – Promass K

Proline 10 – suitable for many industries

Oil & Gas

Tap/click to navigate

Oil & Gas

Filling / pump control

Measurement of the amount of fuel filled into tank trucks or rail tank cars

Consumption measurement

Fuel consumption, e.g., for operating combustion engines

Process control

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



Application areas and examples – Promass K

Proline 10 – suitable for many industries

Life Sciences

Tap/click to navigate

Life Sciences

Evaporation

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

Preparation of purified water

Quantity measurement when distributing buffer solutions in downstream processes



Heartbeat Technology



Increase your plant performance and ...

... boost reliability as well as safety levels

... reduce your verification efforts

... improve your process insights

Heartbeat Technology

for diagnostics



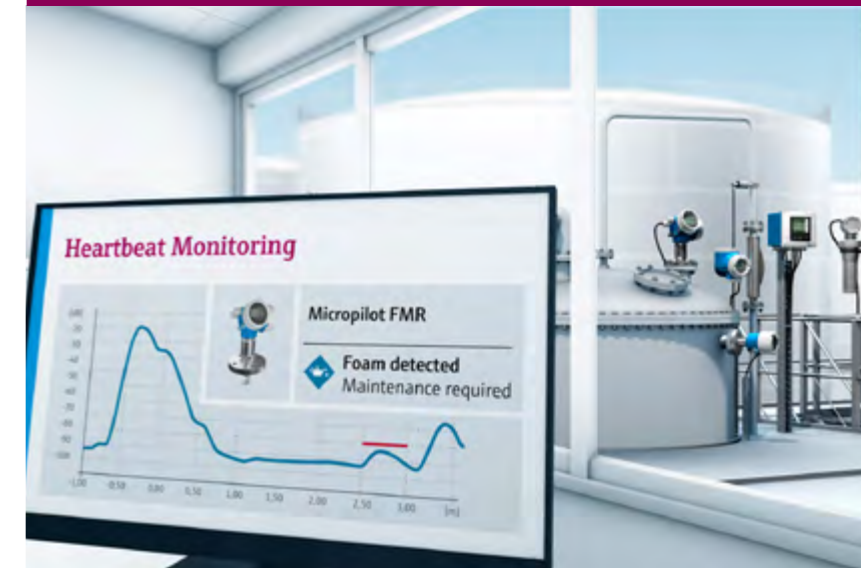
Permanent process and device diagnostics

for verification



Documented device functionality without process interruption

for monitoring



Information for process optimization and predictive maintenance