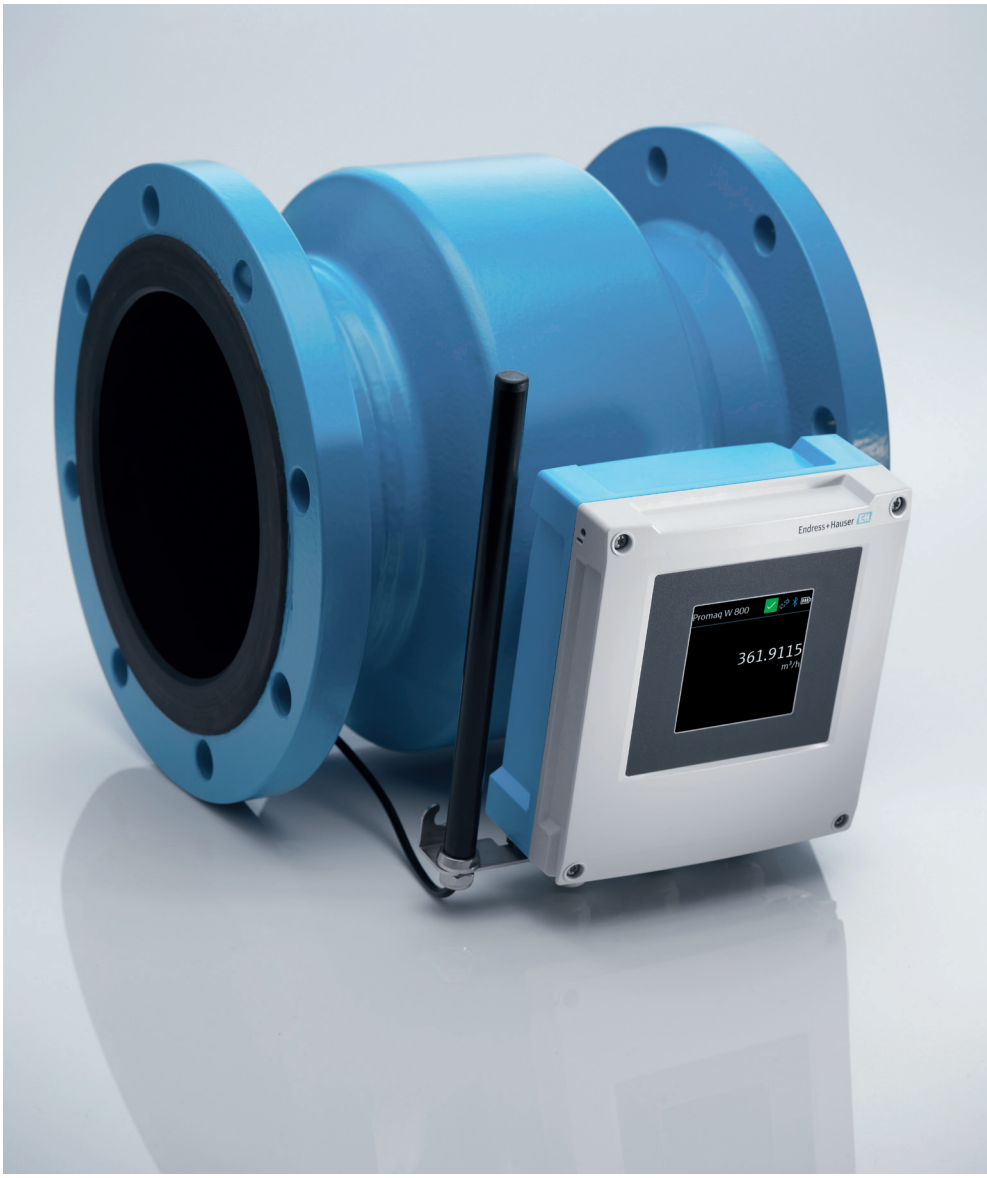
Proline
Promag W 800
Battery-powered, long lasting, secure and with Heartbeat Technology

The tried-and-tested electro-magnetic flowmeter for the water industry

- **Industry-optimized:**
  - For pipes up to DN 600 (24")
  - Approvals for drinking water
- **Reliable long-term operation:**
  - Robust, fully welded sensor with degree of protection IP66/67 (Type 4X) or IP68 (Type 6P)
  - Certified corrosion protection for permanent underground or underwater installation
- **Secure data management:**
  - Worldwide, encrypted data transmission via cellular radio
  - All measured values are stored in the data logger (up to 50000 entries)
- **Heartbeat Technology:** Device verification without process interruption
- **Intelligent during operation:** Free choice of measuring intervals for a maximum battery life of up to 15 years
- **Convenient commissioning:** Operation via SmartBlue app



Endress+Hauser
People for Process Automation

Proline
simply clever

Process monitoring is becoming more demanding and the need for maximum product quality 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 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

Simple operation (HMI)
Time-saving operation directly via smart device (SmartBlue app)

HistoROM
Automatic data storage and data restoration

W@M Life Cycle Management
Open information system for device documentation and management

Seamless system integration
Direct and transparent through digital communication

Promag W 800

Measure anywhere – with or without a power grid

Whether in urban or remote areas, whether in a desert or in the tropics – the accurate measuring and billing of drinking and process water consumption is becoming increasingly important. Endress+Hauser has developed the new Promag W 800 with battery power precisely for such applications. This electromagnetic flowmeter allows versatile and autonomous use even at locations without power supply:

- In areas with sea, river, spring or ground water
- In distribution networks and transfer stations
- In irrigation systems

The Proline 800 transmitter contains everything in the smallest space: electronics, batteries, a data logger and a cellular radio module for sending and receiving data. Furthermore, it can be used to call up measured values and status messages online, e.g. from the cloud with the help of the Endress+Hauser Netilion Water Network Insights solution (page 4). This guarantees reliable monitoring of water flows and long-term economical operation:

- Reliable, seamless consumption measurements
- Exact cost allocation and billing in accordance with the law
- Reliable monitoring of water systems around the clock (quantities, limits, etc.)
- Targeted leakage detection in water distribution systems, e.g. by reading in external pressure values up to 40 bar gauge.

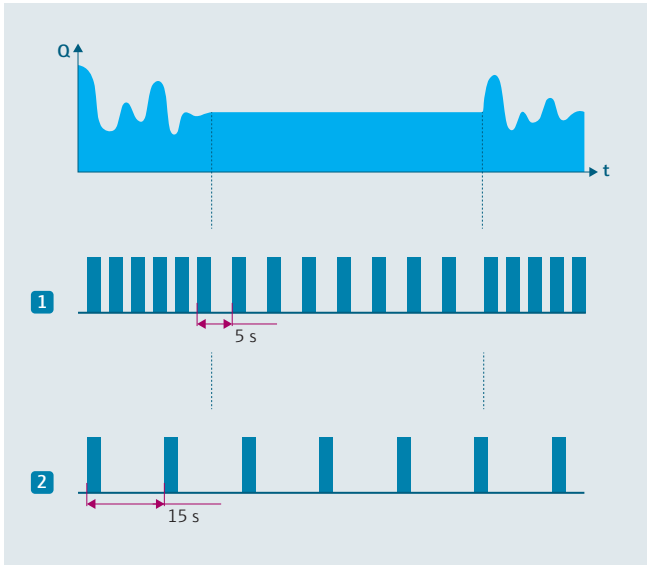
1 Promag W 800 "Advanced" with cellular radio antenna
2 Promag W 800 standard version
3 Promag W for underground installation with corrosion protection according to EN ISO 12944

Safe – long lasting – maintenance-free

Promag convinces several times

Heartbeat Technology – Verification made easy
Maximum plant availability is an absolute necessity in the water industry. That is why Promag W 800 has comprehensive diagnostic, monitoring and verification functions:

- Testing function in accordance with the law – can be activated at any time
- Permanent self-diagnostics for maximum safety
- Metrologically traceable device verification without process interruption
- Tamper-proof verification protocols can be retrieved at any time, e.g. as quality documentation (ISO 9001) for audits
- Significant extension of legally prescribed recalibration cycles (in consultation with the Weights and Measures Service)



Maximum battery life thanks to intelligent electronics
Depending on the application and the flow dynamics, the measuring intervals can be individually adapted with Promag W 800:

1 **Intelligent adaptation:** The measuring intervals are automatically adapted depending on the flow dynamics to achieve the maximum battery life.

2 **Fixed value:** The measuring interval is based on a preset value (factory setting: 15 s).

Permanently resistant under water or underground
Measuring devices are frequently installed outdoors and subjected to heat, dust or extreme climatic fluctuation. Continuous use under water or underground is even more demanding. Promag W is a sensor specially designed for such environmental conditions:

- Certified corrosion protection according to EN ISO 12944:
  - For underwater installations (Im1/Im2)
  - For underground installations (Im3)
  - In regions with a saline environment (C5-M)
  - In regions with extreme fluctuations of humidity or temperature
- Robust, fully welded sensor
- Corrosion-resistant housing made of polycarbonate
- High water ingress resistance due to IP68 protection type (Type 6P)

Seamless system integration with Promag W 800

An example of Endress+Hauser's cloud-based "Netilion Water Network Insights"

Netilion Water Network Insights for monitoring water networks

Netilion Water Network Insights

5. Data fusion and analysis
Algorithms for leakage detection, verification, forecasts, etc.

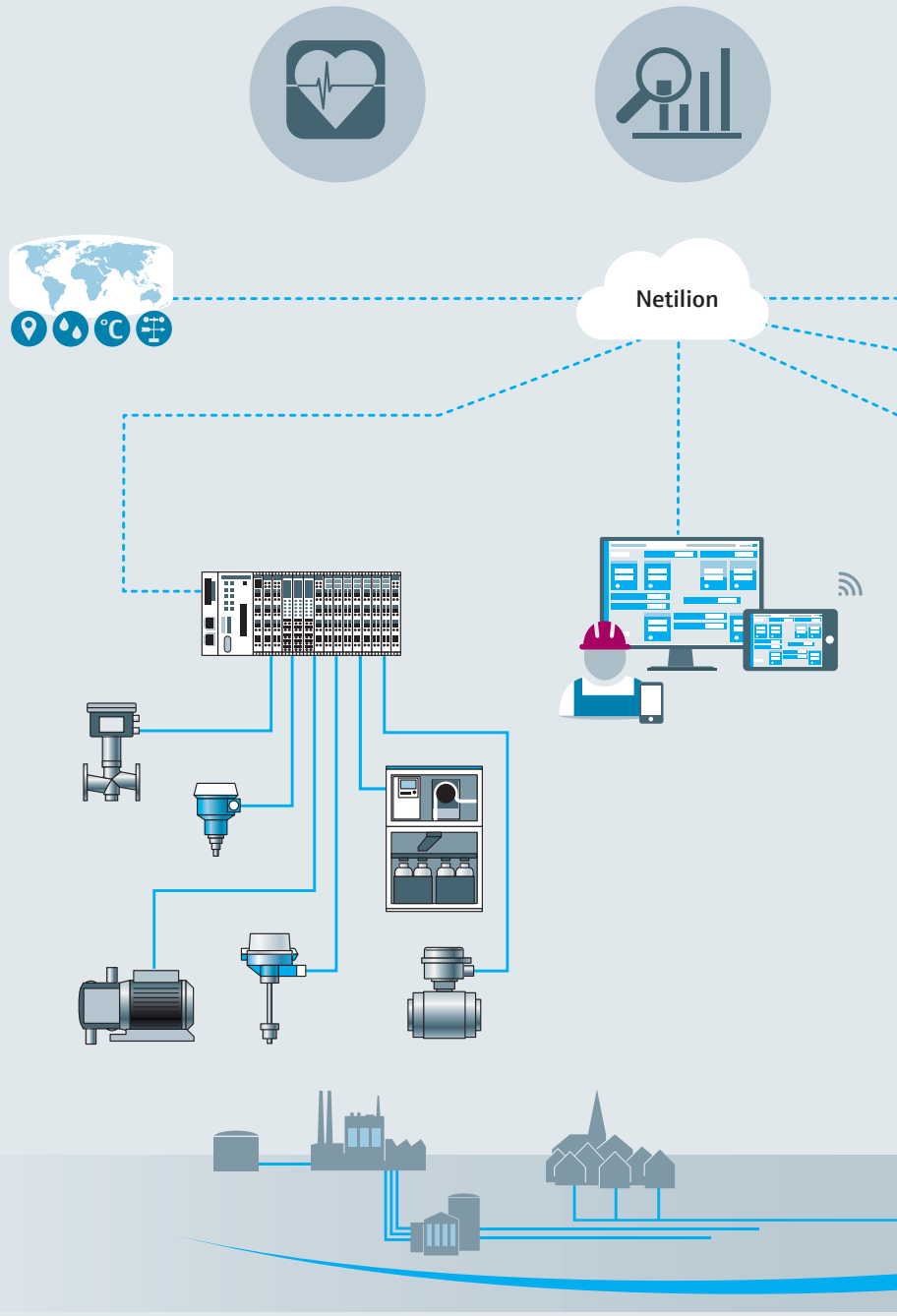
4. Data management and visualization
Monitoring of water networks and decentralized infrastructures (incl. display of weather/geo-information data)

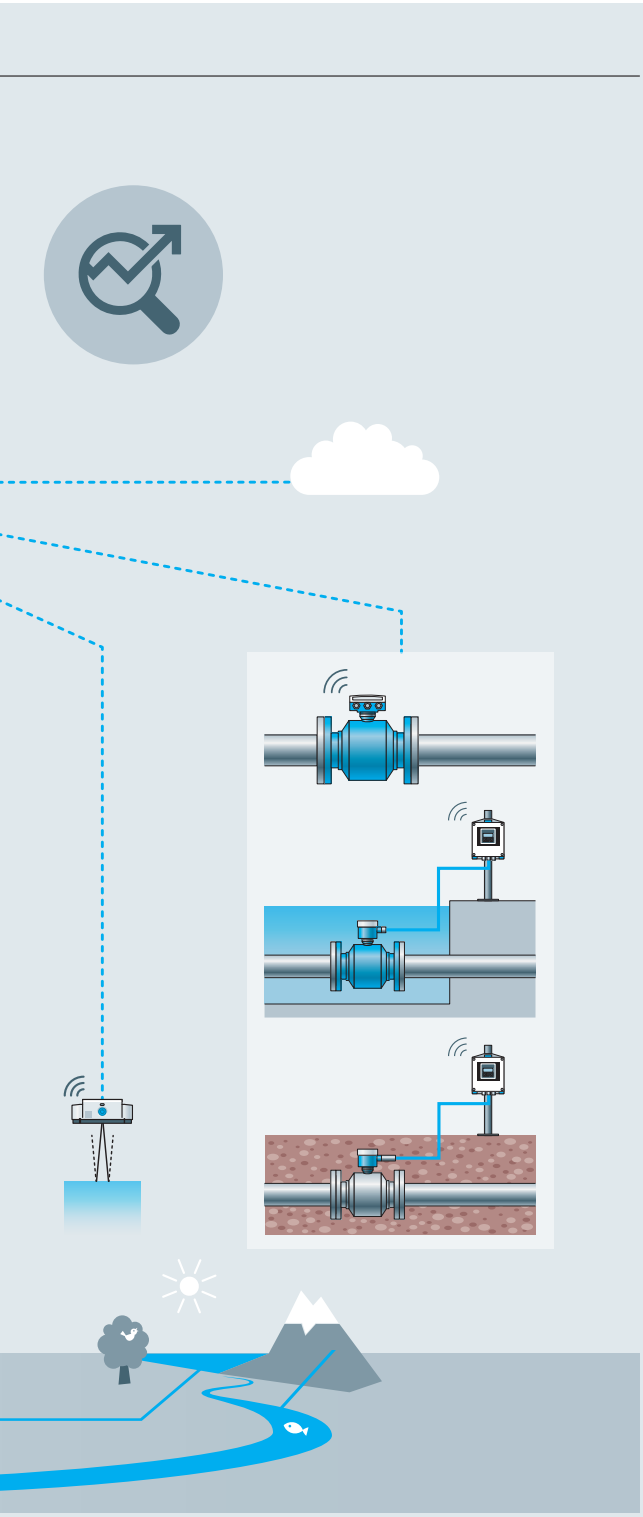
3. Data collection and transmission
Flexible edge connectivity solutions

2. Data collection and control
Smart field devices and sensors (flow, analysis, pressure, level, temperature, etc.)

Actuators (pumps, valves, etc.)

1. Physical world
Water management infrastructure (pipes, pumps, valves, etc.)





Measurement of a spring discharge with battery-powered Promag W 800

Secure data transmission and operation
Promag W 800 enables wireless data transmission at any time via a cellular radio module, e.g. from regions that have no power supply or one that is unstable:

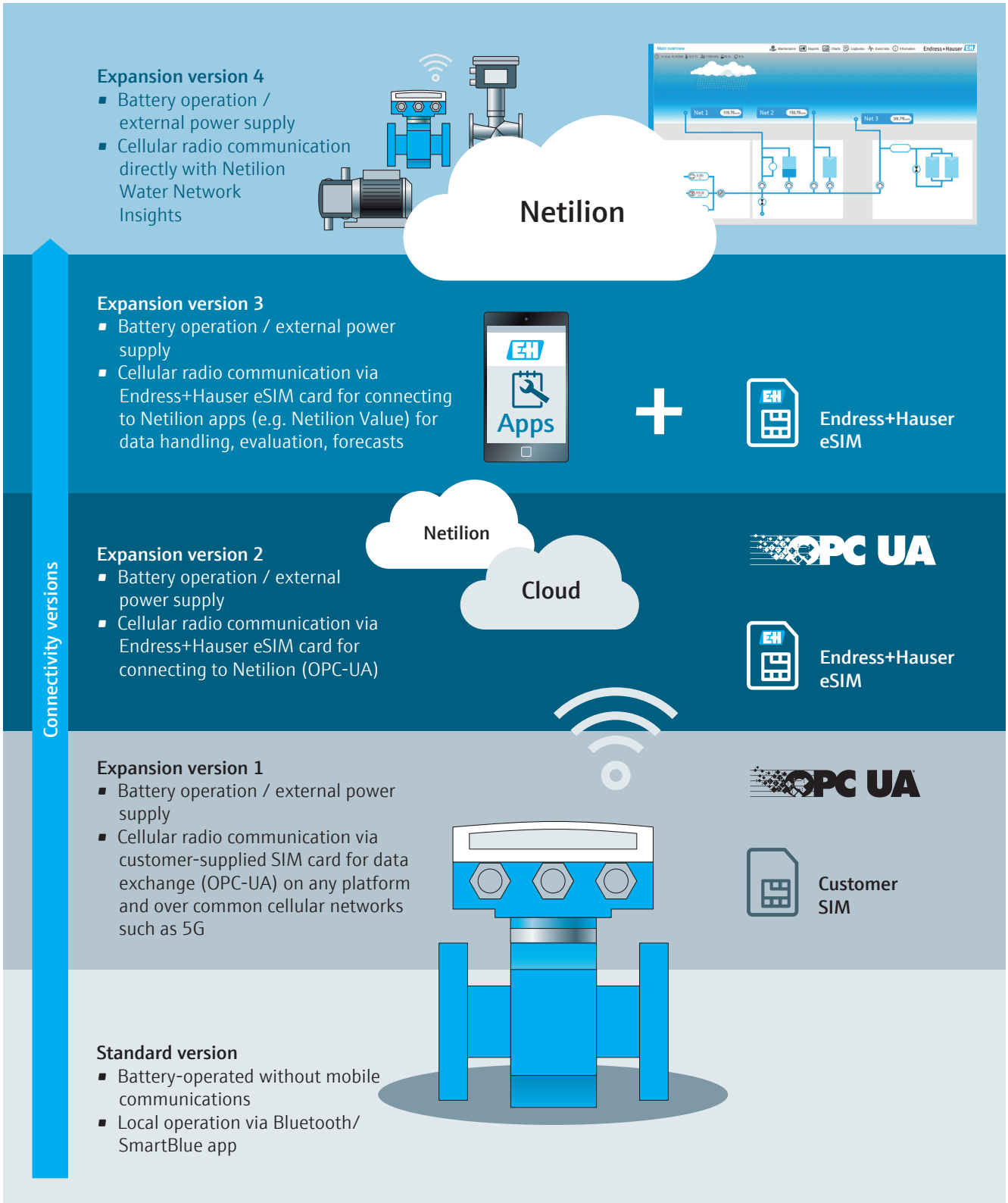
- **Intuitive** – easy operation and data retrieval via Bluetooth using the SmartBlue app
- **Flexible** – can be integrated into customer-specific SCADA systems or into the Endress+Hauser Netilion Water Network Insights cloud solution
- **Comprehensive** – online insights into measurement data and device information such as flow rate, pressure, totalizer, device/process status, alarm messages, level of battery charge, geodata, etc. via:
  - Netilion Value: for easy access to important measured values of a particular device
  - Netilion Water Network Insights: web-based solution for monitoring/visualizing water systems in which Promag W 800 is used
  - Customer-supplied control center
- **One-of-a-kind** – device verification (with real-time stamp) during operation via Heartbeat Technology
- **Secure** – worldwide, end-to-end encrypted data transmission

More information about Netilion Water Network Insights

https://eh.digital/NWNI

Promag W 800
Tailored to your application

Future-oriented – expandable – flexible

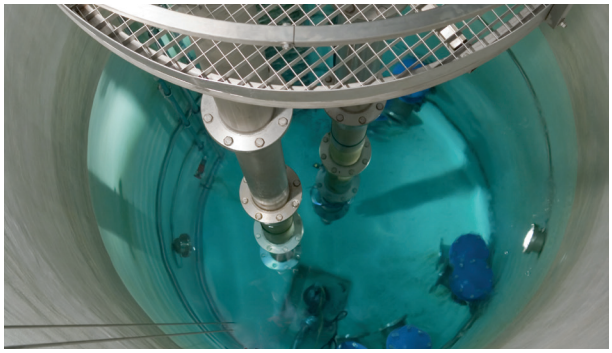


Ideally suited for a broad range of measuring tasks

Types of water

Raw water (river / sea water)

Spring water

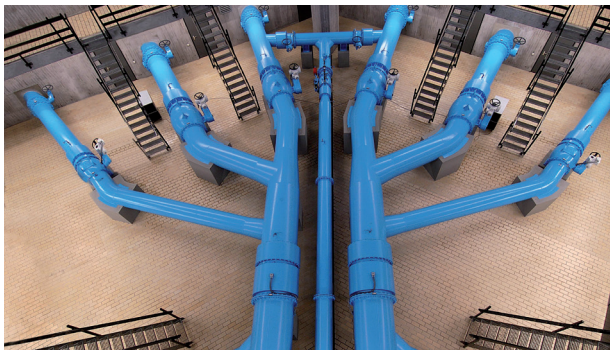


Ground water

Drinking and process water

Measuring points

Spring tapping, reservoirs (discharge measurement)



Pumping station/distribution networks (quantity measurement)

Irrigation areas (consumption measurement)

Transport pipelines (quantity measurement, leakage detection)

Technical data

Proline 800 Transmitter	
	
Display	Backlit graphical display
Operation	▪ Via SmartBlue app (Bluetooth) ▪ Encrypted remote data transmission via LTE Cat M1, LTE Cat NB1, EGPRS[2]
Power supply	Battery operation: DC 3.6 V, lithium-thionyl chloride high-performance battery Power grid (option)[2]: AC 85 to 265 V / DC 19 to 30 V (50/60 Hz)
Material	Polycarbonate
Design	Compact and remote version[2]
Ambient temperature	−25 to +60 °C (−13 to +140 °F)
Degree of protection	Standard: IP66/67 (Type 4X) Option: IP68 (Type 6P)[1]
Outputs	▪ 3 pulse/switch outputs ▪ Modbus RS485 ▪ Cellular radio[2]
Inputs	1 status input[2]
Communication	Modbus RS485, MQTT[2] (cloud), cellular radio (data transmission via LTE Cat M1, LTE Cat NB1, EGPRS)[2]
Approvals	Radio approval[2]

Promag W Sensor	
	
Nominal diameter	▪ Full-bore version: DN 25 to 600 (1 to 24") ▪ Version with restricted measuring tube (no inlet run required): DN 50 to 300 (2 to 12")
Process connections	Flanges: EN (DIN), ASME, JIS, AS
Process temperature	−20 to +80 °C (−4 to +176 °F)
Degree of protection	▪ Standard: IP66/67 (Type 4X) ▪ Option: IP68 (Type 6P) for remote version
Max. measured error	±0.5% o.r. ± 2 mm/s (0.08 in/s)
Turndown	over 1000:1
Material (liner)	Polyurethane, hard rubber
Conductivity	≥20 µS/cm
Approvals	▪ Drinking water: KTW/W270, WRAS BS6920, ACS, NSF 61 ▪ Custody transfer (in prep.) ▪ Pressure: PED, CRN

[1] Only with Promag W 800 | [2] Only with Promag W 800 Advanced

Subject to modification

The Promag W 800 measuring system fulfills the EMC requirements according to IEC/EN 61326. It also conforms to the requirements of the EU and ACMA directives and thus carries the CE and RCM mark.

www.addresses.endress.com

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

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