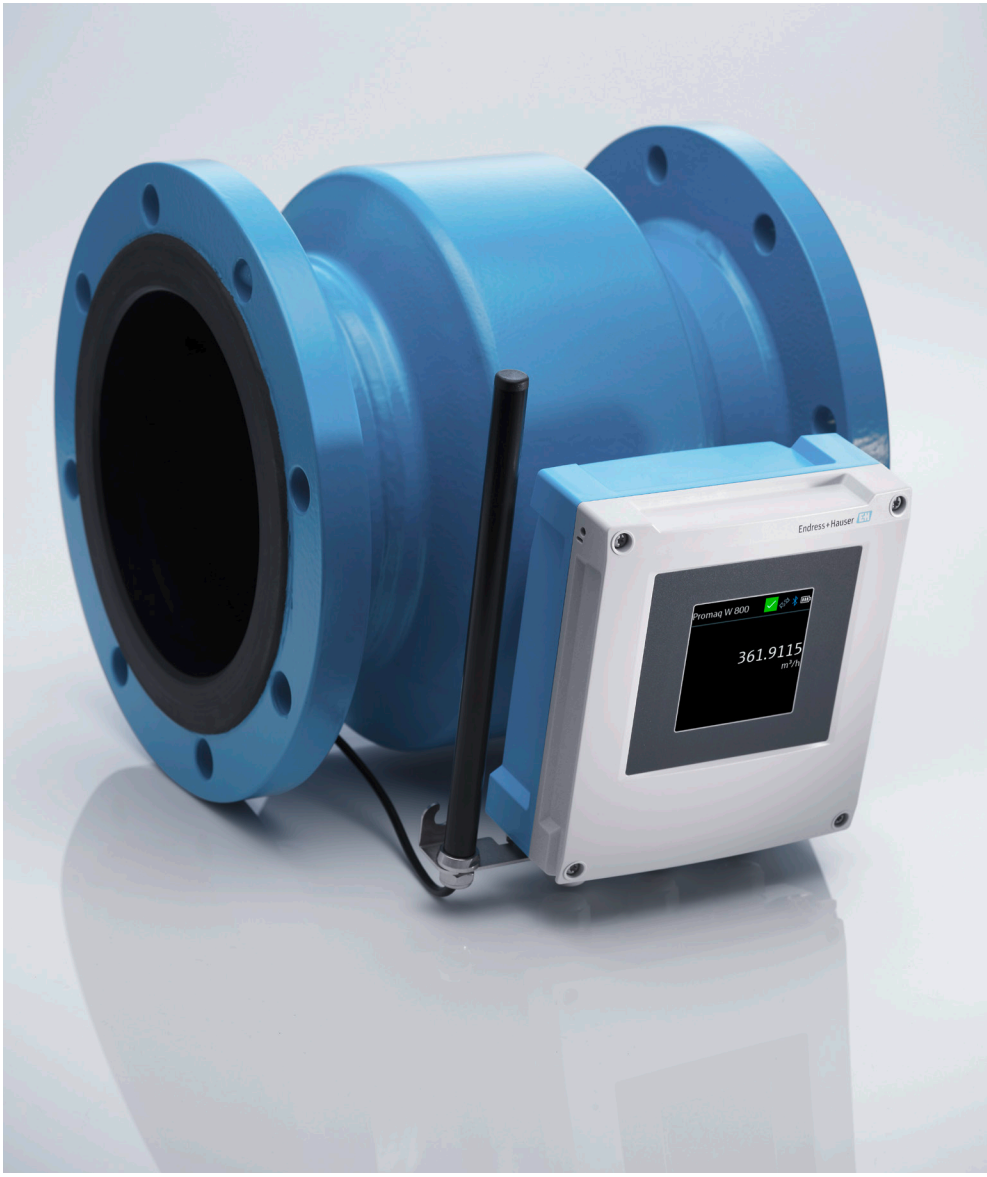
Proline
Promag W 800
Battery-powered, long lasting, secure and with Heartbeat Technology

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

- **Industry-optimized:**
  - For pipes up to DN 900 (36")
  - International 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 50,000 entries)
- **Heartbeat Technology:** Traceable 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 current 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
Continous diagnostic and tracable device verification according to ISO 9001

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

HistoROM
Automatic data storage and data restoration

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 Promag W 800 with battery power precisely for such applications. This electro-magnetic flowmeter allows versatile and autonomous use even at locations without power supply:

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

The Proline 800 transmitter contains everything in a compact design: electronics, batteries, a data logger and a cellular radio module for sending and receiving data. Thus, measurement values and status messages can be retrieved online via mobile networks and integrated into local on-premises systems for safe, long-term and economical measurement operation. 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

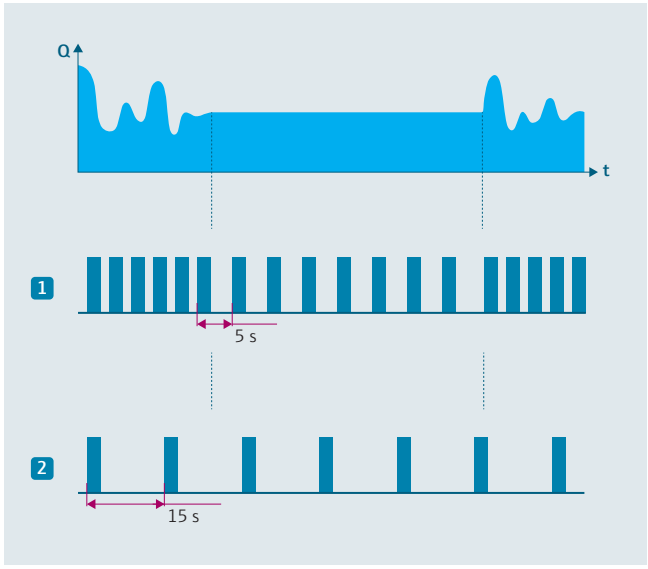
1 Promag W 800 “Advanced” with cellular radio antenna
2 Promag W 800 standard version
3 Promag W for underground installation with corrosion protection according to EN ISO 12944

Safe – long lasting – maintenance-free

Promag W 800 convinces several times

Heartbeat Technology – device verification made easy
Highest measuring accuracy and maximum reliability are absolutely essential in the water industry. Promag W 800 with Heartbeat Technology features integrated diagnostic and verification functions that check device functionality and strengthen confidence in measurement:

- Permanent self-diagnostics with very high test coverage
- Traceable verification according to ISO 9001 (attested by TÜV SÜD) for fulfilling the legal obligation to provide evidence, for quality documentation at audits and for seamless documentation of device functionality
- Verification during operation – possible at any time via device interfaces and through remote access, without process interruption or device removal
- Optimization of calibration intervals (in consultation with metrology authorities)



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 underwater 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 (Type 6P)

Seamless system integration with Promag W 800

An example of Endress+Hauser's cloud-based solution Netilion

Netilion for monitoring water networks

Netilion

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

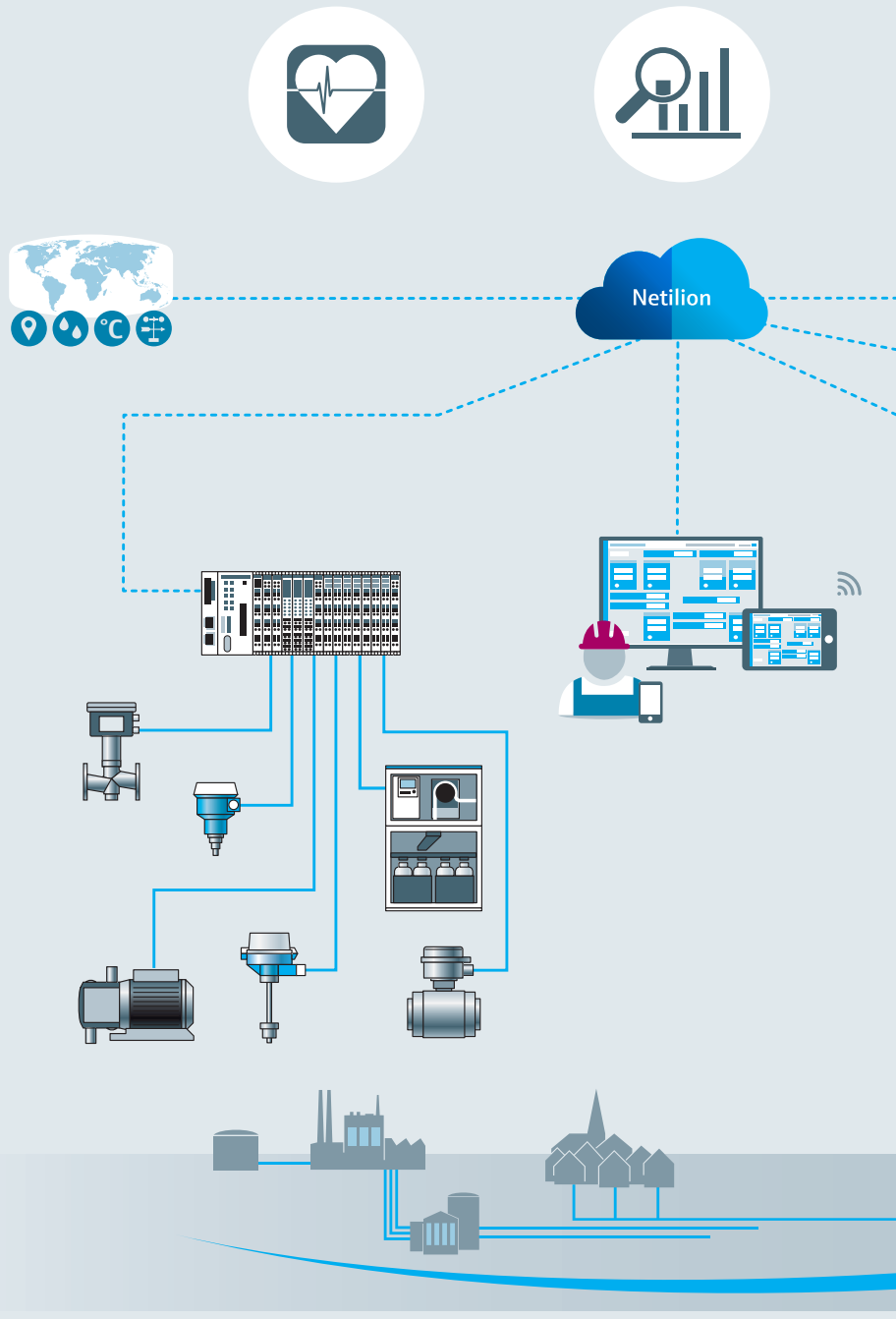
4. Data management and visualization
Monitoring of water networks and decentralized infrastructures (incl. display of weather/geo-information data)

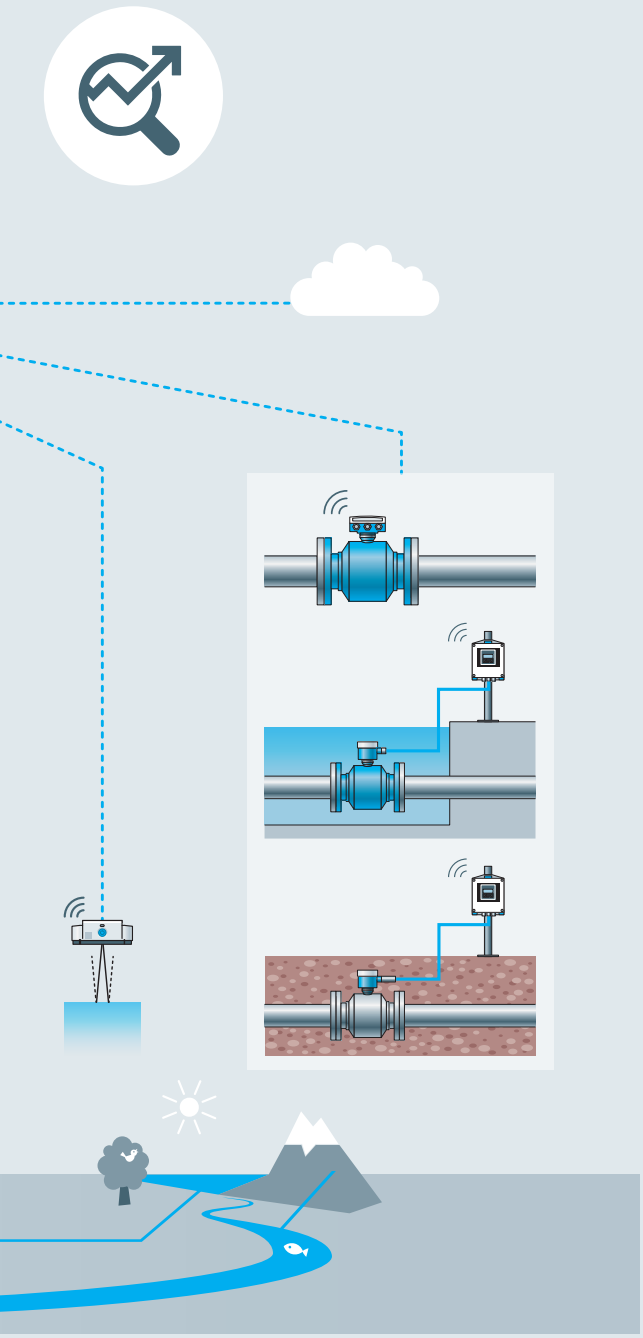
3. Data collection and transmission
Flexible edge connectivity solutions

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 with no power supply or with unstable power:

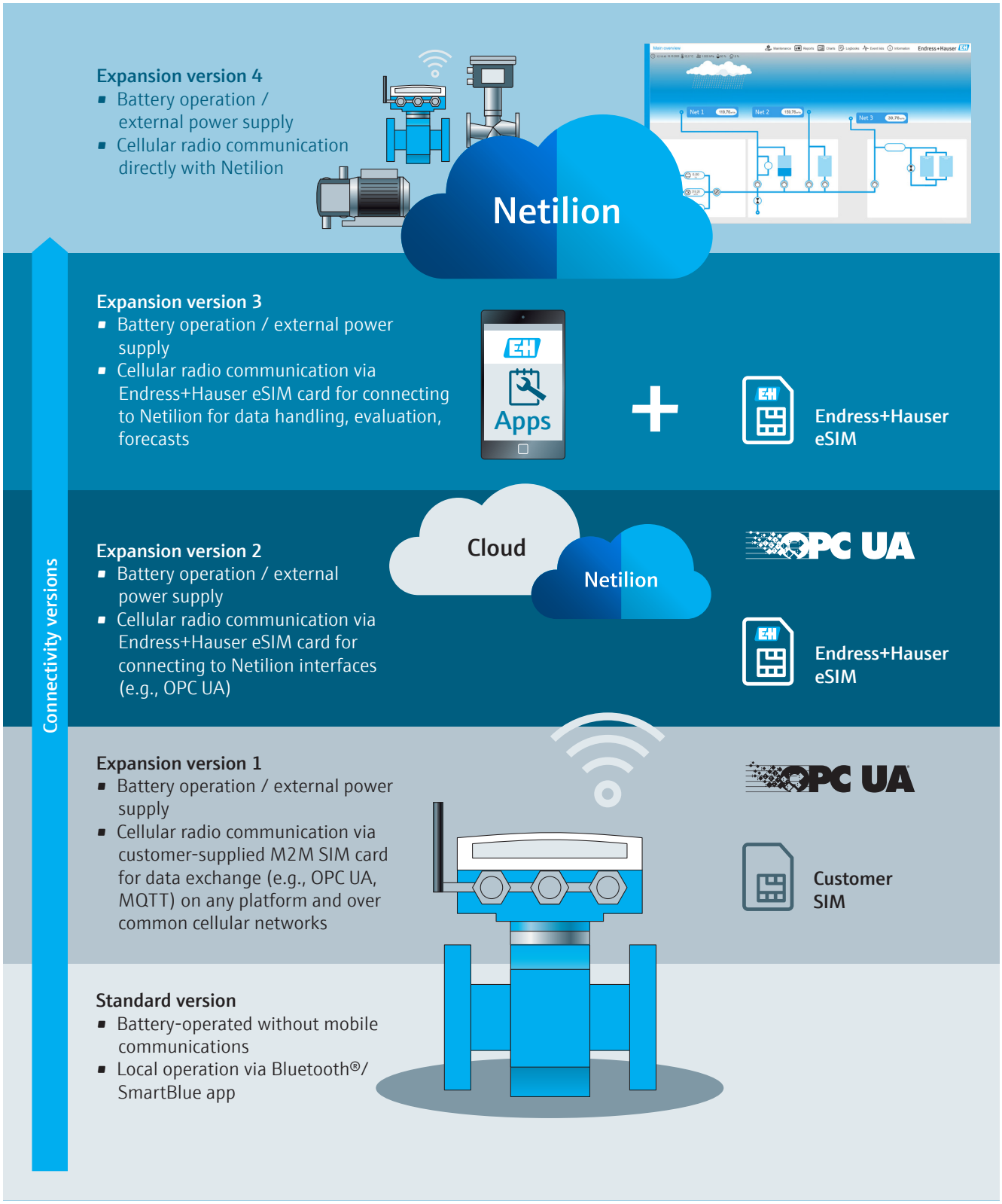
- **Intuitive** – easy operation and data retrieval via Bluetooth® using the SmartBlue app
- **Flexible** – can be integrated into customer-specific SCADA systems or into the Endress+Hauser Netilion cloud solution
- **Comprehensive** – online insights into measurement data and device information such as flow rate, pressure, totalizer, device/process status, alarm messages, level of battery charge, geodata, etc. via:
  – Customer-supplied SCADA systems
  – Netilion: web-based solution for monitoring/visualizing water systems in which Promag W 800 is used
- **One-of-a-kind** – traceable in-situ device verification according to ISO 9001 without process interruption via Heartbeat Technology
- **Secure** – worldwide, end-to-end encrypted data transmission (TLS or mTLS)

More information about Netilion

https://www.endress.com/netilion

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)

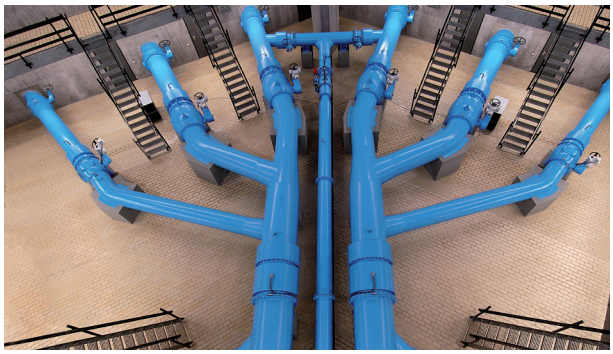
Spring water

Groundwater

Drinking and process water

Measuring points

Spring tapping, reservoirs (discharge measurement)



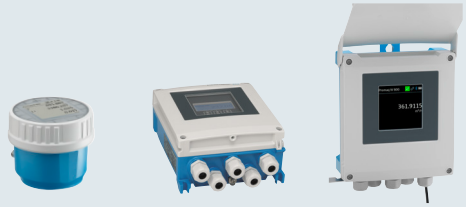
Pumping station/distribution networks (quantity measurement)

Irrigation areas (consumption measurement)

Transport pipelines (quantity measurement, leakage detection)

Technical data

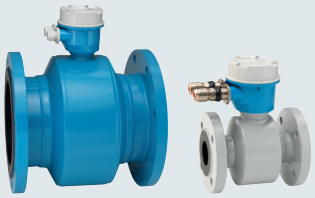
Proline 800 (Transmitter)



Display	Backlit graphical display
Operation	▪ Via SmartBlue app (Bluetooth®) ▪ Encrypted remote data transmission[2] via cellular radio
Power supply	Battery operation: DC 3.6 V, lithium-thionyl chloride high-performance battery Power grid (option)[2]: DC 24 V AC 100 to 240 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[2] (data transmission via LTE Cat M1, LTE Cat NB1, LTE Cat NB2, EGPRS, GPRS)
Approvals	Radio approval[2]

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

Promag W (Sensor)



Nominal diameter	▪ DN 25 to 900 (1 to 36") ▪ 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 +70 °C (–4 to +158 °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, PTFE
Conductivity	≥20 µS/cm
Approvals	▪ Drinking water: KTW-BWGL, WRAS BS6920, ACS, NSF 61 ▪ Custody transfer: OIML R49, MI-001 ▪ Pressure: PED, CRN

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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