Proline Prosonic Flow E 100 ultrasonic flowmeter

Economical Ultrasonic flowmeter with integrated temperature measurement

Benefits:
- Long-term stability – reliable, robust sensor
- Reducing further measuring point – multivariable device
- Dependable flow measurement – high turndown (200:1)
- Time-saving local operation without additional software and hardware – integrated web server
- Extended calibration intervals – integrated device verification due to Heartbeat Technology
- Easy commissioning – brief parameter explanations

Specs at a glance
- **Max. measurement error** Volume flow: - ± 0.5 % o.r. ± 0.02% o.f.s. for 0.5 to 10 m/s (1.6 to 33 ft/s) - ± 0.07 % o.f.s. for flow velocities < 0.5 m/s (1.64 ft/s)
- **Measuring range** 0.025 to 5 m/s (0.02 to 16.4 ft/s) 0 to 6360 dm³/min (0 to 1680 gal/min)
- **Medium temperature range** 0 to 150° (17.8 to 302 °F)
- **Max. process pressure** PN 25 / ASME Cl. 150
- **Wetted materials** Measuring tube: 1.4301 (F304) Process Connection: 1.4571; 1.4404 (F316L); 1.0038 (S235JR); 1,4306 (F304L); 1.4307 (F304L); A105

Field of application: Measuring of demineralized water in utilities, for example in boiler condensate return lines, requires reliable devices. Prosonic Flow E 100 provides economical and accurate bidirectional flow measurement across all industries. With its integrated temperature measurement, Prosonic Flow E 100 proves to be a multivariable flowmeter for considerable additional value in your plant. Heartbeat
Technology ensures measurement reliability and enables extension of recalibration cycles.

**Features and specifications**

### Liquids

**Measuring principle**
Ultrasonic flow

**Product headline**
Economical Ultrasonic flowmeter with integrated temperature measurement.
Bidirectional measuring of demineralized water applications for Utilities, e.g. boiler condensate return lines.

**Sensor features**
Measurement accuracy up to ±0.5 % (flow) or according to EN 1434 Cl. 2, ±2.0 °C (± 3.6 °F) (temperature). Process temperatures up to 150 °C (302 °F). Entire meter housing made of stainless steel.

**Transmitter features**
4-20 mA HART, pulse/frequency output. Local display for reading and monitoring available. Robust transmitter housing.

**Nominal diameter range**
DN 50 to 150 (2" to 6")

**Wetted materials**
Measuring tube: 1.4301 (F304)
Process Connection: 1.4571; 1.4404 (F316L); 1.0038 (S235JR); 1.4306 (F304L); 1.4307 (F304L); A105
### Liquids

**Measured variables**
Volume flow, calculated mass flow, flow velocity, sound velocity, temperature

**Max. measurement error**
Volume flow:
- $\pm 0.5\%$ o.r. $\pm 0.02\%$ o.f.s. for 0.5 to 10 m/s (1.6 to 33 ft/s)
- $\pm 0.07\%$ o.f.s. for flow velocities $< 0.5$ m/s (1.64 ft/s)

**Measuring range**
0.025 to 5 m/s (0.02 to 16.4 ft/s)
0 to 6360 dm³/min (0 to 1680 gal/min)

**Max. process pressure**
PN 25 / ASME Cl. 150

**Medium temperature range**
0 to 150° (17.8 to 302 °F)

**Ambient temperature range**
-20 to 60 °C (-4 to 140 °F)

**Sensor housing material**
Stainless steel

**Transmitter housing material**
Compact:
AlSi10Mg, coated
Stainless steel, 1.4301

**Degree of protection**
Standard: IP66/67, Type 4X enclosure
With opened housing: IP20, Type 1 enclosure

**Display/Operation**
4-line backlit display available (no local operation)
Configuration via web browser and operating tools possible
### Outputs
- 4-20 mA HART (active)
- Pulse/frequency/switch output (passive)

### Inputs
None

### Power supply
DC 19.2 to 28.8 V

### Hazardous area approvals
None

### Product safety
CE, C-Tick, EAC marking

### Metrological approvals and certificates
- Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025)
- Heartbeat Technology complies with the requirements for measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)
- Calibration according to EN 1434 Class 2

### Pressure approvals and certificates
PED

### Material certificates
3.1 material

More information [www.endress.com/9E1B](http://www.endress.com/9E1B)