Proline Prosonic Flow P 500 ultrasonic flowmeter

Clamp-on flowmeter for limited spaces in process industries with up to 3 I/Os

More information and current pricing:
www.casc.endress.com/9P5B

Benefits:

- Constant accuracy even when mounted with short inlet run thanks to FlowDC
- High safety standards – SIL by design, international hazardous area approvals
- Long-term stable signal – maintenance-free permanent mounting from outside with coupling pads
- Reliable measurement on various pipe materials – sensor for GRP and plastic pipes available
- Full access to process and diagnostic information – numerous, freely combinable I/Os
- Reduced complexity and variety – freely configurable I/O functionality
- Integrated verification – Heartbeat Technology

Specs at a glance

- **Max. measurement error** Volume flow: ±3% o.r. for DN 15 ±2% o.r. for DN 25 to DN 200 ±2% o.r. above DN 200
- **Measuring range** 0 to 15 m/s (0 to 50 ft/s)
- **Medium temperature range** DN 15 to 65 (½to 2½"): –40 to +150°C (–40 +302 °F) DN 50 to 4000 (2 to 160"): –40 to +170°C (–40 to +338 °F)
- **Max. process pressure** N/A

Field of application: The proven sensor Prosonic Flow P can be installed close to elbows, expansions or constrictions in the pipe and still maintain the same measurement accuracy. Even measurement of abrasive, corrosive or toxic fluids is no problem for the non-invasive clamp-on device. Prosonic Flow P 500 is mounted without process interruption or opening the pipe. Heartbeat Technology not only ensures measurement

reliability and compliant verification but also helps to find the optimal mounting position.

Features and specifications

Liquids

Measuring principle

Ultrasonic flow

Product headline

Flowmeter for hazardous area installations with a wide range of analog and digital outputs.
Automatic frequency scan for maximum measuring performance.
Ideal clamp-on device for applications with chemicals, solvents, liquid hydrocarbons, acids, alkalis.

Sensor features

Increased safety for chemical and petrochemical industry – international hazardous area approvals. Long-term stable signal – maintenance-free permanent mounting from outside with coupling pads. Process transparency – diagnostic capability.
Medium temperature: –40 to 170 °C (–40 to 338 °F). Wide nominal diameter range: DN 15 to 4000 (½ to 160"). Process piping unaffected by meter installation.

Transmitter features

Highest performance – extended functionality and diagnostics. Flexible data transfer options – numerous communication types. Automatic recovery of data for servicing.
Aluminium transmitter housing. 4 - line backlit display with touch control. HART, PROFIBUS PA/DP, FOUNDATION Fieldbus.

Nominal diameter range

Dual channel, 1 or 2 paths : DN 15 to 4000 (1/2 to 160")

Liquids

Sensor materials

Clamp on system:
Sensor holder 1.4301/304, 1.4404/316L
Sensor housing 1.4301/304, 1.4404/316L
Strapping bands 1.4301/304, 1.4404/316L

Measured variables

Volume flow, sound velocity, flow velocity, totalizer

Max. measurement error

Volume flow:
±3% o.r. for DN 15
±2% o.r. for DN 25 to DN 200
±2% o.r. above DN 200

Measuring range

0 to 15 m/s (0 to 50 ft/s)

Max. process pressure

N/A

Medium temperature range

DN 15 to 65 (½to 2½"): –40 to +150°C (–40 +302 °F)
DN 50 to 4000 (2 to 160"): –40 to +170°C (–40 to +338 °F)

Ambient temperature range

–40 to +60 °C (–40 to +140 °F)
–50 to +60 °C (–58 to +140 °F) optional

Sensor housing material

N/A

Transmitter housing material

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

Degree of protection

Sensor remote version: IP68 type 6P
Transmitter remote version: IP66/67, Type 4X enclosure

Liquids

Display/Operation

4-line backlit display with touch control(operation from outside)
Optional: WLAN
Configuration via local display and operating tools possible

Outputs

3 outputs:
4-20 mA HART (active/passive)
4-20 mA (active/passive)
Pulse/frequency/switch output (active/passive)
Double pulse output (active/passive)
Relay output

Inputs

Status input
4-20 mA input

Digital communication

HART, Modbus RS485

Power supply

DC 24 V
AC 100 to 230 V
AC 100 to 230 V / DC 24 V (non-hazardous area)

Hazardous area approvals

ATEX, FM/CSA, UK Ex

Other approvals and certificates

Other approvals and certificates

Product safety

CE, C-tick

Functional safety

Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511

Liquids

Metrological approvals and certificates

Flowmeter verification for DN 15, 25, 40, 50 & 100
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

Marine approvals and certificates

Marine certificate

More information **www.casc.endress.com/9P5B**