Micronics™

PORTAFLOW D650 non-contacting Doppler flow meter

Fast and Easy Flow Measurement of Challenging Mediums from Outside The Pipe

FEATURES:

- Portable non-contact flow measurement for the harshest mediums and environments
- Suitable for fluids containing suspended solids or bubbles (minimum size of 100 microns, minimum concentration 75 ppm)
- Rugged IP67 extruded aluminum enclosure
- Advanced signal processing
- Low power mode to extend battery life
- Cost effective metering
- Stainless steel mounting kit and carry case
- Simple to install and operate
- Built-in 12 million point data logger

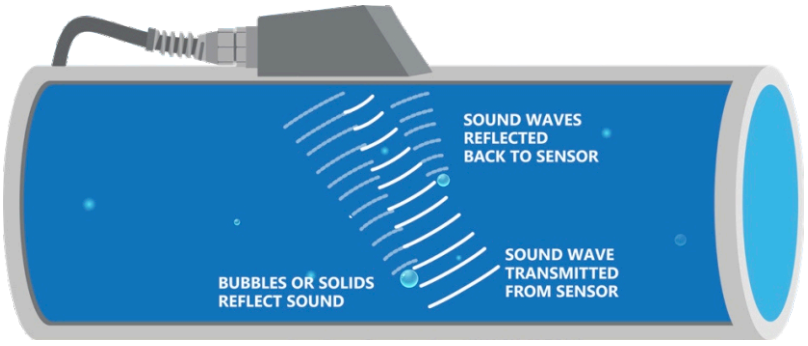
APPLICATIONS:

Recommended for:

- Sewage
- Treated Wastewater
- Aerated Water
- Sludge and Slurries
- Chemicals and Solvents
- Viscous Liquids
- Abrasives
- Food Products
- Pulp Stock
- Acids and Caustics

MEASUREMENT PRINCIPLES:

The Portaflow D650 ultrasonic sensor injects high-frequency sound through the pipe wall and into the flowing liquid. Gas bubbles or solids suspended in the liquid reflect the ultrasonic signal to the sensor. When this sound is reflected from moving bubbles or particles it is returned to the sensor at a shifted frequency. This frequency shift is called the Doppler effect. The PF D650 continuously measures the change from its transmitted frequency to the received frequency to accurately measure flow.



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TECHNICAL SPECIFICATION:

GENERAL SPECIFICATIONS

Operating Parameters:	Liquids containing suspended solids or bubbles minimum size of 100 microns, minimum concentration 75 ppm
Flow Rate Range:	±0.03 m/s to 12.2 m/s (±0.1 ft/s to 40 ft/s) in most applications
Pipe Size:	Ultrasonic sensor mounts on any pipe from 12.7 mm to 4.6 m ID (0.5 in to 15 ft)
Display:	Color TFT LCD display, IPS type, 2.8" screen size, 320 x 240 resolution, 500 NITS brightness, super wide view
Power Input:	• Built-in rechargeable lithium polymer battery for up to 15 hours continuous operation • External mains to USB-C charger with 100-240V AC, 50-60Hz, 0.6A input; and 5.0V DC, 3A, 15W output
Outputs:	Log files, daily log files, parameter settings files, and waveform capture files via USB-C flash drive (included)
Data Logger:	12 million point capacity, configurable for velocity or flow rate, date and time stamped, configurable format for Logger Software (LG2) or CSV, available intervals of 10 s, 30 s, 1 min, 2 min, 5 min, 10 min, 15 min, 30 min, and 1 hr
Extended Logging:	Can be deployed in sleep-logging mode for extended battery duration.

Logging Interval	30 sec	1 min	2 min	5 min	10 min	15 min
Est. Battery Duration	5 days	8 days	15 days	30 days	45 days	60 days

PC Software:	Free Logger Software for Windows. For display, manipulation, analysis, and exporting of data.
Operating Temp. (Electronics):	-20 °C to +60 °C (-5 °F to +140 °F)
Electronics Enclosure:	IP67 when transducer cables connected. IP65 when transducers cables not connected. Aluminum enclosure with silicone protective end covers.
Carry Case:	IP67, with protective molded foam with room for transducer and installation hardware
Accuracy:	±2% of reading or 0.03 m/s (0.1 ft/s), whichever is greater. Requires solids or bubbles minimum size of 100 microns, minimum concentration 75 ppm. Repeatability: ±0.1%, Linearity ±0.5%
Configuration:	Built-in 5-button keypad interface with English, French, and Spanish menu language selection. Optional user-configured password protection.
Approvals:	CE

TRANSDUCER SPECIFICATIONS

Standard Model PSE4-A2:	Clamp-on, single-head ultrasonic for pipes from 12.7 mm to 4.6 m ID (0.5 in to 15 ft) with 3.4 m (12 ft) shielded dual-coaxial cable and latching connector
Sensor Mounting Kit:	Stainless steel pipe clamp and 3.0 fl oz coupling compound
Pipe Materials:	Steel, stainless steel, cast iron, ductile iron, concrete-lined ductile iron, PVC, HDPE, or any contiguous pipe material that conducts sound, including lined pipes with a liner bonded to the pipe wall. Avoid pipes with loose insertion liners and pipe walls that contain air.
Operating Temperature:	-40 °C to +150 °C (-40 °F to +300 °F)
Ingress Protection	IP68, can withstand 10psi (approx. 23 ft or 7 m of H2O) for 24 hours

POPULAR OPTIONS

Sensor Cable:	15.2 m (50 ft) sensor cable extension, shielded, with connectors
Sensor Mounting:	Extra silicone coupling compound. Additional stainless steel pipe clamps

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