FLO-SONIC™ OCFM
Open Channel Ultrasonic Transit-Time Flow Meter

FLO-SONIC™

FLO-SONIC™ uses the very latest electronic technology combined with highly efficient digital signal processing (D.S.P.), technique which maximizes the system performance giving the user significant benefits.

FLO-SONIC™ gives outstanding measurement capability including the ability to adapt its operation to suit the most challenging site conditions.

The system consists of one or more FLO-SONIC™ Ultrasonic Speed Processors associated to one UNITRANS™ Flow processor and Monitor. Two probes per Ultrasonic path with sensor installation hardware and cables.

Technical Specifications

Velocity Measurement
- Method: Ultrasonic Transit-Time
- Range: ± 0.001 m/s to ± 10 m/s
- Bi-directional measurement
- Accuracy: ± 1% of reading or 0.005 m/s (whatever value is bigger)
- Repeatability: ± 0.05%
- Technologies:
  - Automatic control of ultrasonic signal using the ESC mode (Echo Shape Control)
  - Automatic zero flow adjustment with “anti-air bubble” signal processing
  - Echo analyzer with automatic control (ESC)
  - Dynamic Gain up to 89 dB.

Data Storage
- 1,000,000 measurements if used in combination with UNITRANS™

Local Terminal
- RS-232: Used in combination with PC software for configuration
- Keypad: For menu configuration (access code possible)

Time-Based Accuracy
- High resolution time measurement < 0.1 ns.

Display
- Dimensions: 15 x 63 mm; two lines of text display
- 16 characters programmable; back lit LCD

Outputs
- Two 4-20 mA outputs: system-isolated, up to 500 ohm load.

Contact Closure
- Two OC contact closure for alarm
- Rating: 0.1A @ 100 VDC

Housing
- Material: ABS plastic, NEMA 4
- Dimensions: 258 W x 237 D x 145 H mm
- Protection Rate: IP65
- Weight: 2.5 kg

Environmental Working Conditions
- Operating Temperature: -10 to +50°C
- Storing Temperature: -20 to +70°C
- Humidity: 20 to 95% r.H. (not condensing)

Power Requirements
- 115/230 VAC, 50-60 Hz, max. 10 watts; 12 VDC or 24 VDC (must be specified at time of ordering)

www.flowtronic.com
Technical Specifications

Flow Processor and Monitor
UNITRANS™ flow monitor and processor combines up to 4 paths for standard applications (up to 16 paths are possible for special applications on request).
For more technical information, please refer to the UNITRANS™ technical specification sheet.
Multi-parameter display: Flow, speed, gain, signal quality ratio,…

ESC Mode and automatic zero flow
To achieve accurate flow readings, proper probes selection and installation are required. The ESC mode acts as an ‘Auto focus’ for the ultrasonic signals in order to optimize the acoustic signal. Zero offset adjustment at no flow conditions is not necessary, nevertheless auto zero function can still be used.

Performance
Typical velocity measurement accuracy on the path following dry calibration: ± 1 %
Linearity on test loop: ± 0,1 %
Practical flow measurement accuracy depends on the application, number of US measuring paths, cross paths or not.

Probes and Support
Flow-Tronic offers a large range of conventional technology and microstructure technology probes, working at different frequencies with sensor mounts and supports, designed for easy and secure installation.
Optional ATEX certified sensors are available for waste water applications.

Typical applications
Flows in all open channel water applications: potable water, raw water, rivers, waste water and sewage
Climate and hydraulic engineering – Network balancing – Performance