

Accusonic Model 7510+ Multiple-Path Transit-Time Flowmeter



About Accusonic

Accusonic® Technologies, a division of ADS® LLC, designs and manufactures ultrasonic transit-time flow measurement systems that are renowned for their precise accuracy and reliability in difficult operating environments. Accusonic flowmeter systems can be found in hydroelectric plants, thermal power plants, water and wastewater treatment facilities, sewage collection systems, and other types of water flow conveyance pipelines and channels. With over 35 years of experience and over 3000 systems installed worldwide, Accusonic offers a full range of services including installation, system integration, turbine performance testing services, and field training.

SYSTEM DESCRIPTION

The Accusonic Model 7510+ provides accurate, reliable flow measurement for applications ranging from full pipes to partially full or surcharged pipes, open channels, streams, and rivers. The 7510+ has the ability to measure up to 8 paths in the same measurement section, assuring superior performance even in the presence of severely distorted flow profiles. Additionally, the 7510+ can measure flow in up to 4 separate pipes and/or channels simultaneously.

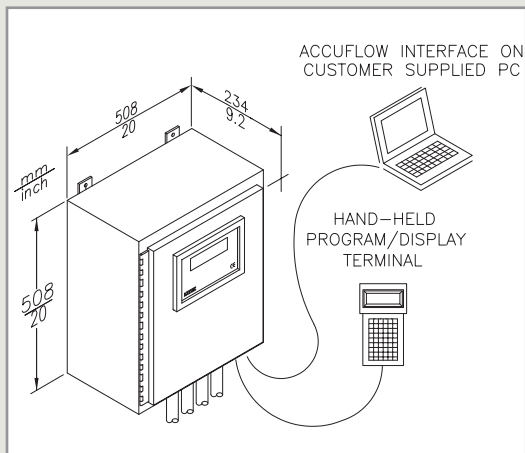
The Model 7510+ can be fully integrated into a complete flowmeter network system via the Accusonic Model 7700 Master Control Unit. Further information on the Model 7700 may be obtained in the Model 7700 Network Flowmeter System data sheet.

The complete offering of Accusonic transducers is available for use with the 7510+, including designs for hazardous area installations, exposed pipes of all materials, buried or encased pipes, and pipes and channels that cannot be dewatered.

UNIQUE FEATURES OF THE MODEL 7510+

- **Flexibility:** Measurable pipe and channel sizes can range from 8 inches (200 mm) to 600 feet (180 m). This versatility allows customers to utilize one meter technology for a wide variety of applications, thus providing a common platform for maintenance, inventory, and training.
- **Accuracy:** Utilizing multiple chordal path transit-time technology, the 7510+ provides accurate flow measurement ($\pm 0.5\%$ for full pipes and $\pm 2.0\%$ for partially full pipes and open channels) even in the presence of flow profile distortions and cross flow. No other flow measurement technology can offer this level of performance over the range of pipe/channel sizes and under such challenging operating conditions.
- **Economy:** The 7510+ is configurable to measure up to 4 separate pipes and/or channels simultaneously, thus significantly reducing the cost per measurement. This feature, combined with the meter's high performance and minimal maintenance requirements, provides the 7510+ with a lower cost of ownership and greater value than comparable flow measurement technologies.

SYSTEM SPECIFICATIONS



Measurement Options:

- Open Channel
- Pipe Flowing Full
- Pipe Flowing Partially Full to Surcharged

Number of Acoustic Paths: 1 – 8

Number of Pipes or Channels: 1 – 4

(The total number of acoustic paths in all pipes and channels cannot exceed 8 for a single console)

Accuracy:

- +/-0.5% Full Pipe Applications
- +/-2.0% Partially Full Pipe/Open Channel Applications (typical)

Repeatability:

- +/-0.2% Full Pipe Applications
- +/-0.5% Partially Full Pipe/Open Channel Applications (typical)

Outputs:

- (4) Isolated 4 – 20 mA with 750 ohm max impedance load
- Optional 3, 6, or 9 Relay Outputs 7.0 A @ 110 VAC or 5.0 A @ 24 VDC
- (2) RS-232 Ports
- Optional Modbus Slave RS-485 or RS-232 RTU Mode only
- Optional Ethernet

Inputs: (4) – 20 mA 100 ohm input impedance for water level inputs. 24 VDC loop power available

Software Interface:

AccuFlow™ Windows-based software allows for easy flowmeter setup and configuration via notebook PC

Datalogger:

2 MB internal storage of measured and calculated variables

Display Options:

- 2 line X 20 character LCD display
- Hand-held Program / Display Terminal

Diagnostics:

- Signal Travel Times
- Sonic Velocity
- Signal Gains
- Signal to Noise Ratio
- Error Messages

Power Requirement:

- 90 - 250 VAC, 47-65 HZ
- 100 - 300 VDC, 12, 24 VDC
- 26 to 35 watts power consumption (200 watts with optional heater)

Enclosure:

NEMA 4 (IP65) wall or post mounted

Environmental Conditions:

- Storage: 0 to 150 deg. F (-18 to 65 deg. C)
0 to 95% RH
- Operation: 15 to 140 deg. F (-10 to 60 deg. C)
0 to 95% RH
- Operational range can be increased with optional heater to: -15 to 140 deg. F (-26 to 60 deg. C)

Enclosure Dimensions:

- 20" h x 20" w x 9.2" d (508 x 508 x 234 mm)
- 60 lb. (27 kg)

Hazardous Area Locations:

Optional Class 1, Divisions 1 & 2, Groups C & D
ATEX Zone 0 & 1

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

www.accusonic.com

ACCUSONIC®

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