

# 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

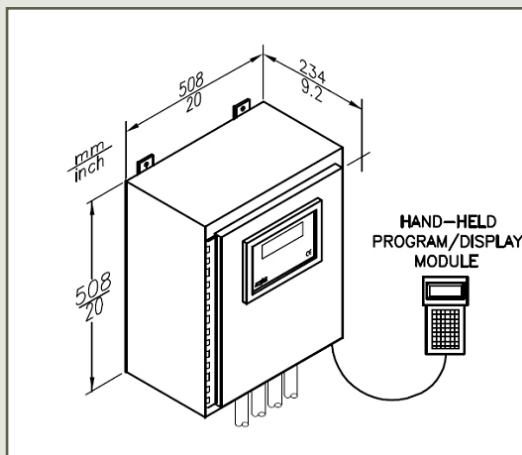
The Accusonic Model 7510+® provides accurate, reliable flow measurement on applications ranging from full pipes to partially full or surcharged pipes, open channels, streams, and rivers. Additionally, the 7510+ can measure up to four separate pipes and/or channels simultaneously. Measurable pipe/channel sizes range from 8 inches (200mm) to 600 feet (180m). Utilizing multiple-path chordal transit-time technology, achievable accuracy is +/-0.5% in full pipes and +/-2.0% in partially full pipes and channels.

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:** The 7510+ can measure flow in full pipes to partially full to surcharged pipes and channels, streams, and rivers. Pipe and channel size can range from 8 inches to 330 feet. This versatility allows customers to utilize one meter type for a wide variety of application requirements negating the need to inventory, train on, and maintain a variety of different flowmeter types.
- **Accuracy:** The 7510+ provides accurate flow measurement (+/-0.5% for full pipes and +/-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 adverse operating conditions.
- **Economy:** The 7510+ is configurable to measure up to 4 separate pipes and/or channels simultaneously, thus significantly reducing the equipment cost. This feature, in combination with the meter's high accuracy and minimal maintenance requirements, provides the 7510+ with a lower cost of ownership 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)

### 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:

- Four 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
- Two RS-232 Ports
- Optional Modbus Slave RS-485 or RS-232 RTU Mode only
- Optional Ethernet

**Inputs:** Four 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
- Handheld terminal keypad/display

### 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 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

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