The Polysonics DCT6088 is an advanced transit time flowmeter which utilizes a unique digital correlation technique to measure the flow of clean liquids. The non-intrusive design can be applied to pipes of all sizes which helps to reduce installation cost and service downtime. The technology completely eliminates pressure loss and leakage in pipes.

Polysonics DCT6088

Dedicated Transit Time Flowmeter
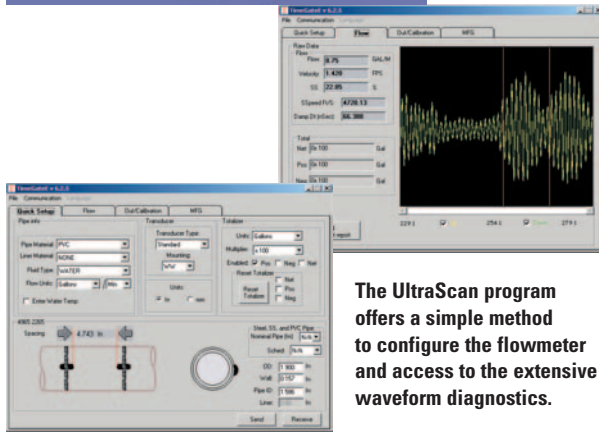
The UltraScan program offers a simple method to configure the flowmeter and access to the extensive waveform diagnostics.

Sample Applications
- HVAC
- Potable water
- Ultrapure liquid
- Deionized water
- Petroleum products
- Water and waste management

Features
- Accuracy to ±0.5% of velocity fullscale
- 0.01 ft/sec flow sensitivity
- Up to 4 programmable relays
- Easy to install, clamp-on design
- Bi-directional flow measurement
- Powerful 30,000 point data logger

Combining digital signal processing (DSP) with correlation detection methods, the Polysonics DCT6088 features exceptional performance and flexibility. The Polysonics DCT6088 will tolerate higher concentrations of gas bubbles or entrained solids compared to traditional transit time flowmeters which are principally designed for extremely clean liquid applications only. The non-intrusive, clamp-on transducers can be installed without flow interruption and ensure leak-free measurements with zero pressure drop. The simple, menu-driven operation of the Polysonics DCT6088 allows the meter to be commissioned in a fraction of the time necessary for competitive transit time flowmeters.

Housed in a rugged Nema 4X (IP65) enclosure and qualified for -40°C (-40°F) operation, the Polysonics DCT6088 is well-suited to most industrial environments. The standard display is a high resolution, backlit LCD providing excellent visibility even in poorly lit conditions. Outputs include a 12-bit digital, optically-isolated, 4-20mA analog signal and RS232 serial interface.

Up to four programmable relays can be specified. The relays may be used as a contact output to a remote device such as an alarm, totalizer, sampler or chlorinator. A powerful 30,000 point data logger programmable in intervals of one second or more is also incorporated in the flowmeter.

The plug-in, modular construction of the instrument simplifies field service and in the unlikely event of failure permits boards to be replaced in seconds. The Polysonics DCT6088 features many parts which are common to other Thermo flowmeters, dramatically reducing spare parts inventory at sites where multiple meters are in service.

Formerly Thermo Polysonics

Analyze • Detect • Measure • Control™

Thermo
ELECTRON CORPORATION

Polysonics DCT6088 Dedicated Transit Time Flowmeter

	Specification
Performance Specifications	
Velocity Range	±0 to 15 m/s (±0 to 50 ft/s)
Accuracy	±0.5% of velocity or ±0.05 ft/sec typical
Fluids	Potable water, ultrapure liquids, deionized water, petroleum products
Pipe Size	25mm to 5m (1 to 200 in)
Physical Specifications	
Transmitter	Nema 4X (IP65), flame retardant, fiberglass reinforced polyester
Transducers	Two encapsulated transducers suitable for submersion or underground service; 9 m (30 ft) standard cable length
Weight	Approximately 5.4 kg (12 lbs)
Functional Specifications	
Outputs	4-20 mA (into 1k - 5k ohms), 12-bit, 5 kV, opto-isolated, loop or self-powered; RS232 serial interface
Power Supply	90-132 Vac or 190-250 Vac, 50/60 Hz (switch selectable); 11-28 Vdc
Temperature Range	Transducers: (surface) -40°C to +100°C (-40°F to +212°F); (ambient) -28°C to +80°C (-20°F to +176°F)
	Transmitters: -40°C to +60°C (-40°F to +140°F)
	Contact factory for higher temperature range requirements
Keypad	19-key with tactile action
Display	2-line, 40-character, alphanumeric, backlit LCD indicating present and total flow, velocity and signal strength
Data Logger	30,000 point data logger; programmable in 1 second intervals

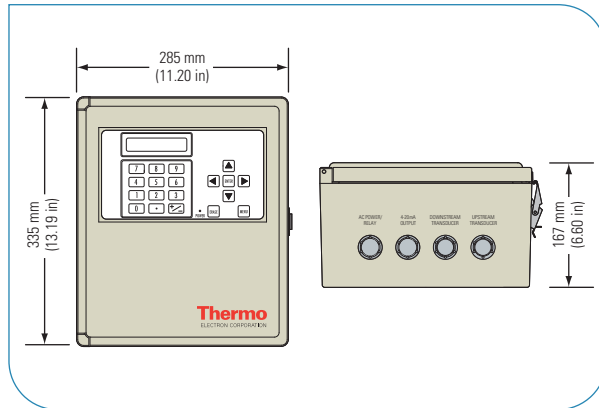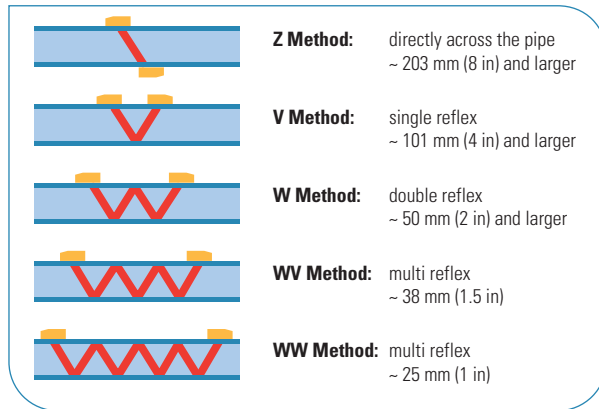### Figure 1 – Polysonics DCT6088 Dimensional Diagram

Figure 2 – Polysonics DCT6088 Mounting Methods

Z Method:	directly across the pipe	~ 203 mm (8 in) and larger
V Method:	single reflex	~ 101 mm (4 in) and larger
W Method:	double reflex	~ 50 mm (2 in) and larger
WV Method:	multi reflex	~ 38 mm (1.5 in)
WW Method:	multi reflex	~ 25 mm (1 in)

Ordering Information

MODEL NUMBER
DCT6088: Dedicated Digital Correlation Transit Time Flowmeter

A. POWER SUPPLY
1: 10 to 132 Vac, 50/60 Hz **3:** 11 to 28 Vdc nominal
2: 190 to 250 Vac, 50/60 Hz

B. OUTPUT
0: 4-20 mA dc, no relay **3:** Three relays
1: One relay **4:** Four relays
2: Two relays

C. TRANSMITTER ENCLOSURE
1: NEMA 4X **2:** NEMA 7

D. TRANSDUCER TYPE
S: Standard cable (100°C/212°F max)
H: High temp cable (200°C/392°F max)

E. CABLE LENGTH
030: 9 m (30 ft) cable
XXX: XXX = length in feet

F. TRANSDUCER HAZARDOUS AREA CERTIFICATION
A: None
B: CSA: Class I, Div. 2 Groups A, B, C, D or Class II, Div. 2 E, F, G
C: CSA: Class I, Div. 1 Groups C, D or Class II, Div. 1. E, F, G
D: CENELEC (LCIE): Eex ia II B T6

MODEL NUMBER | POWER SUPPLY | OUTPUT | TRANSMITTER ENCLOSURE | TRANSDUCER TYPE | CABLE LENGTH | CERTIFICATION

DCT 6088 — A — B — C — D — E — F

Thermo
ELECTRON CORPORATION

Process Instruments United States: 9303 W. Sam Houston Pkwy. S. (877) 290-7422 www.thermo.com
Houston, TX 77099 USA (713) 272-2273 fax