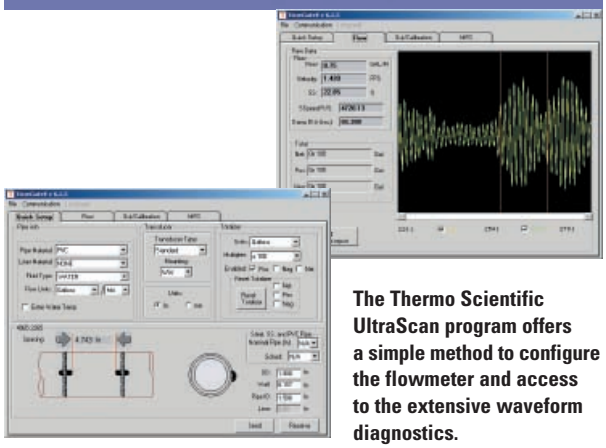
Product Specifications

Thermo Scientific DCT6088

Dedicated Transit Time Flowmeter

The Thermo Scientific DCT6088 advanced transit time flowmeter employs a unique digital correlation technique to reliably measure the flow of clean liquids. Designed for use on pipes of all sizes, the non-intrusive device is easy-to-install, simple to operate, and eliminates pressure loss and leakage which reduces downtime and increases profit potential.



The Thermo Scientific UltraScan program offers a simple method to configure the flowmeter and access to the extensive waveform diagnostics.

Features

- Accuracy to ±0.5% of velocity full scale
- 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

Flexible & Easy-to-Use

Combining digital signal processing (DSP) with correlation detection methods, the Thermo Scientific DCT6088 features exceptional performance and flexibility. It tolerates 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 DCT6088 allows the meter to be commissioned in a fraction of the time necessary for competitive transit time flowmeters.

Engineered for Maximum Uptime

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

Programmable Relays for Remote Output

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.

Modular & Simple to Service

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

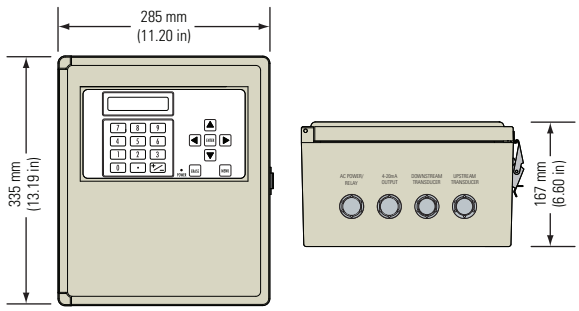
Sample Applications

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

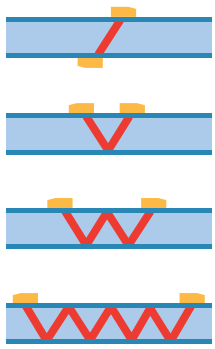
Thermo Scientific DCT6088

Performance Specifications	
Velocity Range	±0 m/s to 15 m/s (±0 m/s 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	25.4 mm to 5 m (1 in to 200 in); For line sizes smaller than 1 inch, consult Thermo Fisher Scientific
Physical Specifications	
Transmitter	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

DCT6088 Dimensional Diagram



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

WW Method: multi reflex
~ 25 mm (1 in)

Ordering Information

MODEL NUMBER
DCT6088: Dedicated Digital Correlation Transit Time Flowmeter

A. POWER SUPPLY
1: 90 to 132 Vac, 50/60 Hz
2: 190 to 250 Vac, 50/60 Hz
3: 12 to 24 Vdc nominal

B. OUTPUT
0: 4-20 mA DC, no relay
1: One relay
2: Two relays
3: Three relays
4: Four 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 Groups E, F, G
C: CSA: Class I, Div. 1 Groups C, D or Class II, Div. 1 Groups E, F, G

MODEL NUMBER	POWER SUPPLY	OUTPUT	TRANSMITTER ENCLOSURE	TRANSDUCER TYPE	CABLE LENGTH	CERTIFICATION
DCT 6088	A	B	C	D	E	F

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