

The powerful Thermo Scientific DCT7088 portable, digital-correlation, transit-time flowmeter is the most durable meter of its kind. Housed in a virtually indestructible, waterproof carrying case, this user-friendly device features a 40,000-point data logger and a memory function that stores four sets of site parameters to simplify installation and ongoing operation.

Thermo Scientific DCT7088

Portable, Digital-Correlation,
Transit-Time Flowmeter



Features

- 40,000-point data logger
- Velocity range of ± 0 to 40 ft/s (± 0 to 12 m/s)
- Bi-directional flow measurement
- Two-line, 40-character, high-resolution, backlit LCD
- RS232 digital communication interface
- Easy-to-install, clamp-on design
- Thermo Scientific UltraScan diagnostics and wave-form analysis software
- IP66 environmental enclosure



Applications

- HVAC
- Ultrapure liquids
- Potable water
- De-ionized water
- Petroleum products
- Water and wastewater management

The advanced Thermo Scientific DCT7088 portable transit-time flowmeter combines digital signal processing (DSP) with correlation detection methods to measure velocity, flow rate and volumetric flow. Principally engineered for clean liquid applications, the instrument is tolerant of liquids with higher concentrations of entrained solids or gas bubbles than was previously possible with transit-time technology. Unlike competitive transit-time flowmeters, multiple transducers are not required for different pipe materials and sizes. The standard transducer set is suitable for most plastic, metal and even concrete-lined pipes that range in size from 1 inch (25.4 mm) to 200 inches (5 m). Pipes measuring less than 2 inches may require smaller transducer housing assemblies. The non-intrusive, clamp-on transducers install without flow interruption and ensure leak-free measurements with zero pressure drop.

Housed in a rugged IP66 enclosure, the DCT7088 is waterproof against accidental immersion with the lid closed, is splash-

proof and is built to operate in severe weather conditions. A two-line, 40-character, high resolution, backlit LCD display ensures excellent visibility even in poorly lit conditions. Outputs include a 4-20 mA analog signal and RS232 serial interface. A powerful 40,000-point data logger enables users to quickly upload process data to a laptop or personal computer. A separate memory function stores up to four sets of site parameters, eliminating the requirement to re-enter setup data when returning to a location for further measurements.

Simple menu-driven operation enables the DCT7088 to be configured in a fraction of the time necessary for competitive transit-time flowmeters, and it is programmable to start and finish flow measurements at predetermined times for unattended operation. The meter provides up to 16 hours of continuous battery operation and fully recharges in only 8 hours.



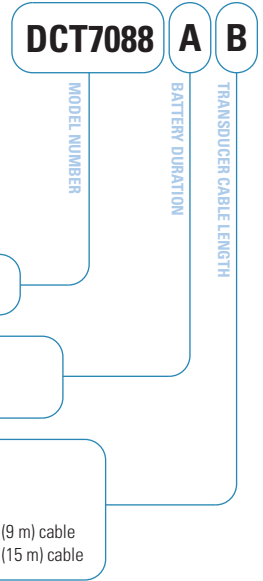
Thermo Scientific UltraScan Software

While the DCT7088 can be set up using its integral keypad, Thermo Scientific UltraScan configuration and signal analysis software simplifies the process by providing easy-to-use menus. In addition to configuration, this Microsoft® Windows®-based program provides access to the flowmeter’s extensive waveform diagnostics, enabling users to easily determine the best location for transducer installation. With UltraScan, data can be downloaded to one or more instruments, eliminating the need to individually program multiple meters. It also enables paperless flow rate data archival, simplifying retention and reporting requirements for ISO 9000, OSHA and FDA compliance.

Thermo Scientific Ultrasonic Thickness Gauge

The Thermo Scientific Ultrasonic Thickness Gauge (UTG) is a compact, rugged device that enables DCT7088 users to determine the pipe wall thickness from the outside of the pipe. It can also be used to measure the corrosion or erosion of storage tank walls.

Ordering Information



MODEL NUMBER

DCT7088: Thermo Scientific DCT7088 portable

A. BATTERY DURATION

- 1:** 8-hour battery
- 2:** 16-hour battery

B. TRANSDUCER CABLE LENGTH

- 16:** 16 ft (5 m) length cable (standard)
- 50:** 50 ft (15 m) length cable
- H30:** High-temperature transducers with 30 ft (9 m) cable
- H50:** High-temperature transducers with 50 ft (15 m) cable

Thermo Scientific DCT7088

Performance Specifications

Velocity Range	±0 to 12 m/s (±0 to 40 ft/s)
Accuracy	±0.5% of velocity or ±0.03 m/s (±0.1 ft/sec)
Sensitivity	0.003 m/s (0.01 ft/sec) at any flow rate including zero
Pipe Size	25.4 mm to 5 m (1 in to 200 in); For line sizes smaller than 2 inches, consult Thermo Fisher Scientific

Functional Specifications

Outputs	4-20 mA (into 1K to 5K Ohms), isolated; RS232 serial interface
Power Supply	Built-in lead acid gel battery: 8-hour continuous operation – standard 16-hour continuous operation – optional 90-264 VAC, 50-60 Hz standard with AC adapter/battery charger
Keypad	19-key with tactile action
Display	40-character, two-line, alphanumeric, backlit LCD; screens include present and total flow, velocity, signal strength and Delta T
Data Logger	Greater than 40,000 data points, time stamped; programmable in one second intervals
Temperature Range	Standard transducers: -40°C to +100°C (-40°F to +212°F) Transmitter: -20°C to +60°C (-5°F to +140°F) for higher temperature, consult Thermo Fisher Scientific

Physical Specifications

Transmitter	355.6 mm (14 in) W x 342.9 mm (13.5 in) H x 152.4 mm (6 in) D IP66, waterproof against accidental immersion and splash-proof with lid closed
Transducers	Encapsulated design
Cable Length	5 m (16 ft) standard
Weight	Approximately 4.9 kg (11 lb) with 8-hour battery Approximately 6.8 kg (15 lb) with 16-hour battery

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