

# Thermo Scientific Model SX30

## Portable dual frequency doppler flowmeter

The Thermo Scientific SX30 flowmeter combines patented (patent #6408699) dual frequency Doppler (DFD) technology with digital signal processing to create an industry leading measurement device for fluids that contain particulate. It is immune to higher levels of external noise than other single frequency Doppler devices, enabling the SX30 flowmeter to operate in a broader range of applications.



### Features

- Accuracy to  $\pm 1\%$
- Simple and easy-to-use
- Excellent noise immunity
- IP66 environmental sealing
- Up to 24 hour battery operation
- Powerful 90,000 point data logger
- Serial interface port for data retrieval via HydraScan software
- Universal AC adapter charging socket

### Applications

- Slurries
- Primary Sludge
- Dredging
- Activated Sludge

### Accurate and reliable

Dual Frequency Doppler (DFD) technology enables the Thermo Scientific SX30 flowmeter to operate in what were previously considered marginal applications for Doppler flowmeters.

Unlike conventional Doppler flowmeters, which operate at a single frequency, the SX30 flowmeter generates two independent ultrasonic signals at different frequencies. By correlating these frequencies, the instrument identifies and eliminates noise errors from sources such as variable frequency drives.

### Application specific

Housed in a NEMA 4X (IP65) enclosure, the instrument is well suited to most municipal and industrial environments. The backlit graphics display provides excellent visibility even in poorly lit conditions. Outputs include a 12-bit, optically isolated,

4-20 mA analog signal and up to four independent programmable relays. The relays can be used for pump control, fault indication, limit switching, sampler activation, power down alarming or remote totalizer driving, enabling this versatile device to fulfill a variety of applications and process needs.

### Durable and easy-to-use

The design features a sealed membrane keypad making the unit fully weatherproof. Large keys make it easy to enter data and navigate the on-screen menu—even with gloved hands.

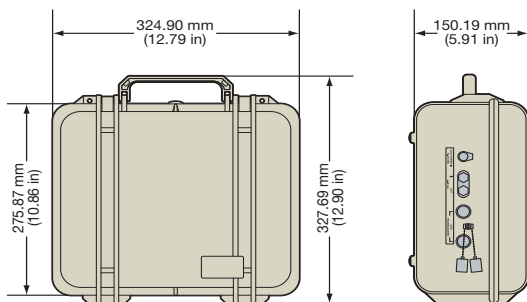


Thermo Scientific™ Model SX30 flowmeter

## Thermo Scientific SX30 DFD Flowmeter

Performance specifications	
Velocity range	0.06 m/s to 5.5 m/s (0.2 ft/s to 18 ft/s), volumetric value based on cross-sectional area of pipe
Accuracy	±1% of velocity full scale
Fluids	Liquids containing particulate or entrained gas bubbles
Pipe size	25.4 mm to 5 m (1 in to 200 in)
Physical specifications	
Transmitter	IP66, waterproof against accidental immersion and splashproof with lid closed
Transducer	Encapsulated dual frequency sensor heads, encased in stainless steel shrouds with integral transducer clamps and BNC connectors 5 m (16 ft) cable - standard; 15 m (50 ft) cable - optional
Weight	Approximately 6.8 kg (15 lbs)
Functional specifications	
Outputs	4-20 mA (into 750 ohms); 12-bit, 5 kV, opto-isolated, loop or self-powered; RS232 serial interface
Power supply	Built-in lead acid gel battery, 24-hour, continuous operation 90-264 VAC, 50/60 Hz, 12-15 VDC auxiliary power port
Temperature range	Transducers: pipe surface -40°C to +121°C (-40°F to + 250°F); ambient air limited to +80°C (+176°F) Electronics: -20°C to + 60°C (-4°F to + 140°F), non-CSA approved
Charge period	8 hours
Keypad	21 key with tactile action
Display	Backlit, 240 × 60 dot, high resolution graphics display
Data logger	90,000 point data logger Programmable in log intervals of 30 seconds or 1, 5, 15, 30 or 60 minutes HydraScan retrieval software for Microsoft® Windows® included as standard Compatible with Microsoft Excel®, Lotus 1-2-3® and other similar packages

## Thermo Scientific SX30 flowmeter dimensional diagram



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