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.

**Thermo Scientific SX30**
Portable Dual Frequency Doppler Flowmeter

**Applications**
- Slurries
- Primary Sludge
- Dredging
- Activated Sludge

**Accurate & 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**
Operation of the SX30 flowmeter is enhanced by an Expert System which allows the flowmeter to automatically “learn” the application parameters. As a result, the SX30 flowmeter can be setup in four easy steps and at a fraction of the time necessary to configure competitive flowmeters.

**Durable & 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.

**Features & Benefits**
- Accuracy to ±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

Thermo Scientific SX30 transducers feature stainless steel shrouds suitable for most pipe materials.
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 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
- **Transducers**: 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
- **Charge Period**: 8 hours
- **Keypad**: 21 key with tactile action
- **Display**: Backlit, 240 x 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 Windows® included as standard**
- **Compatible with Microsoft® Excel®, Lotus® 1-2-3 and other similar packages**
- **Temperature Range**
  - Transducers: pipe surface -40°C to +121°C (-40°F to +250°F); ambient air limited to +80°C (+176°F)
  - Electronics: +5°C to +40°C (+41°F to +104°F), CSA approved;
    - -20°C to +60°C (-4°F to +140°F), non-CSA approved
- **Compliance**: Designed to meet CE and NRTL/C (CSA) for non-hazardous areas

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**Thermo Scientific SX30 Flowmeter Dimensional Diagram**

**Ordering Information**

- **MODEL NUMBER**: SX30: SX30 Portable DFD Flowmeter
- **BATTERY DURATION**: 2: 24-hour (optional)
- **TRANSUDER CABLE LENGTH**: 016: 5 m (16 ft) cable standard 050: 15 m (50 ft) cable optional

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