Combining Dual Frequency Doppler (DFD) technology with digital signal processing, the Polysonics SX30 features exceptional performance and simple operation. Designed for the measurement of fluids which contain particulate, the Polysonics SX30 is immune to much higher levels of external noise allowing it to operate in a broader range of applications than with standard Doppler technology.

The Dual Frequency Doppler (DFD) technology significantly improves the ability of the Polysonics SX30 to operate in what were previously considered marginal applications for Doppler flowmeters. Unlike conventional Doppler flowmeters, which operate at a single frequency, the Polysonics SX30 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.

The operation of the Polysonics SX30 is enhanced by an Expert System which allows the flowmeter to automatically “learn” the application parameters. As a result, the Polysonics SX30 can be set up in four easy steps and at a fraction of the time necessary to configure competitive flowmeters. 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 and Benefits**
- Accuracy to ±1%
- Simple and easy to use
- Excellent noise immunity
- NEMA 6 environmental sealing
- Up to 24 hours 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

**Polysonics SX30**
Portable Dual Frequency Doppler Flowmeter

**Polysonics SX30**
transducers feature stainless steel shrouds suitable for most pipe materials.

**Formerly Thermo Polysonics**
Polysonics SX30 Portable Dual Frequency Doppler Flowmeter

**Performance Specifications**
- Velocity Range: 0.06 to 5.5 m/s (0.2 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: 12 to 5000 mm (0.5 to 200 in)

**Physical Specifications**
- Transmitter: NEMA 6 (IP67), waterproof against accidental immersion and splashproof with lid open
- Transducers: Encapsulated dual frequency sensor heads, encased in stainless steel shrouds with integral transducer clamps and BNC connectors
- Weight: Approximately 4.9 kg (11 lbs) - 12 hour battery
- Approximately 6.8 kg (15 lbs) - 24 hour battery

**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
- 12 hours continuous operation — standard
- 24 hours continuous operation — option
- 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 sec, 1, 5, 15, 30, 60 mins
- 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° to +121°C (-40° to +250°F); ambient air limited to +80°C (+176°F)
- Electronics: +5° to +40°C (+41° to +104°F), CSA approved;
  -20° to +60°C (-4° to +140°F), non-CSA approved
- Compliance: Designed to meet CE and NRTL/C (CSA) for non-hazardous areas

**Figure 1 – Polysonics SX30 Dimensional Diagram**

**Ordering Information**

- **MODEL NUMBER**
  - SX30: Polysonics SX30 Portable DFD Flowmeter

- **BATTERY DURATION**
  - 1: 12 hours (standard)
  - 2: 24 hours

- **TRANSODER CABLE LENGTH**
  - 016: 5 m (16 ft) cable standard
  - 050: 15 m (50 ft) optional cable

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