Seapoint Turbidity Meter

Features

- Very low power requirements
- Small size
- 6000 m depth capability
- Optically confined sensing volume
- Insensitive to ambient light
- Linear output over more than 5 decades
- Four programmable sensitivity options
- Optical feedback compensates for temperature coefficient and aging of optical components
- Very low offset voltage does not require adjustment
- Interfaces easily with data acquisition systems
- Rugged, corrosion-free materials
- Pin compatible with Seapoint Chlorophyll Fluorometer

Applications

- Pollution Monitoring
- Water and Wastewater Quality
- Sediment Transport
- Ocean Profiling
- River and Stream Monitoring

Description

The Seapoint Turbidity Meter detects light scattered by particles suspended in water, generating an output voltage proportional to turbidity or suspended solids. The low power requirements make it ideal for applications where battery drain is a concern. Sensitivity is selected by two digital lines which can be hard wired or microprocessor controlled, thereby choosing the appropriate range and resolution for measurement of extremely clean to very turbid waters. The offset voltage is within 1 mV of zero and requires no adjustment across gains. The unique optical design confines the sensing volume to within 5 cm of the sensor allowing near-bottom measurements and minimizing errant reflections in restricted spaces. The sensor is easily interfaced with data acquisition packages; a 5 ft pigtail is supplied. Custom configurations are available.

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Specifications

**Power Requirements:** 7-20 VDC, 3.5 mA avg, 6 mA pk

**Output:** 0-5.0 VDC

**Output Time Constant:** 0.1 sec

**RMS Noise:** < 1 mV

**Power-up Transient Period:** < 1 sec

**Light Source Wavelength:** 880 nm

**Sensing Distance (from windows):** < 5 cm (approx.)

**Linearity:** < 2% deviation 0-750 FTU

**Sensitivity/Range**

<table>
<thead>
<tr>
<th>Gain</th>
<th>Sensitivity (mV/FTU)</th>
<th>Range (FTU)</th>
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</thead>
<tbody>
<tr>
<td>100x</td>
<td>200</td>
<td>25</td>
</tr>
<tr>
<td>20x</td>
<td>40</td>
<td>125</td>
</tr>
<tr>
<td>5x</td>
<td>10</td>
<td>500</td>
</tr>
<tr>
<td>1x</td>
<td>2</td>
<td>**</td>
</tr>
</tbody>
</table>

(** output is non-linear above 750 FTU)**

**Temperature Coefficient:** < 0.05%/°C

**Depth Capability:** 6000 m (19,685 ft)

**Weight (dry):** 86 g (3.0 oz)

**Operating Temperature:** 0°C to 65°C (32°F to 149°F)

**Material:** ABS plastic, epoxy

**Underwater Connector:** Impulse AG-306/206 (others available on request)

Dimensions

**Connector Version**

- 4.7” (12 cm)
- 1.0” (2.5 cm)

**Bulkhead Version**

- 2.9” (7.4 cm)
- 1.0” (2.5 cm)
- 1.5” (3.8 cm)