Cyclops-7 Submersible Sensors

The CYCLOPS-7 line of submersible sensors is a high performance, compact sensor at a significantly lower price than traditional submersible sensors. The CYCLOPS-7 combination of price, performance and size makes the sensor very attractive for oceanographic, freshwater and dye tracing applications.

Cyclops-7 Highlights

- Extremely small size
  - 5.7” x 0.9” (SSt or Ti)
  - 5.7” x 1.25” (Delrin)
- Affordable price / excellent value
- Built-in light scatter rejection
- Low power consumption
- Integrates into a C6 Multi-Sensor Platform or any third-party platform
- Interfaces with DataBank Datalogger
- Cyclops-7 Submersible Logger Available
- Cyclops Explorer enables various lab applications

Available Sensors

- Blue Green Algae
  - Phycocerythrin (marine)
  - Phycocyanin (freshwater)
- CDOM/FDOM
- Chlorophyll in vivo
  - Blue excitation
  - Red excitation
- Fluorescent Dye Tracing
  - Fluorescein
  - PTSA
  - Rhodamine
- Hydrocarbons
  - Crude Oil
  - Refined Fuels
- Turbidity
- Wastewater Monitoring
  - Optical Brighteners
  - Tryptophan

Custom Optics Available: 260-900 nm

Designed for Integration

Cyclops-7 was designed specifically for integration into any platform that supplies power and datalogging.

Reliable Instruments for an Unreliable World
# Cyclops-7 Submersible Sensors

## Fluorometer Performance

**Linearity:** $0.99R^2$

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>MINIMUM DETECTION LIMIT</th>
<th>LINEAR RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDOM/FDOM</td>
<td>0.1 ppb**</td>
<td>0-1,500 ppb**</td>
</tr>
<tr>
<td></td>
<td>0.5 ppb***</td>
<td>0-3,000 ppb**</td>
</tr>
<tr>
<td>Chlorophyll in vivo</td>
<td>Blue excitation</td>
<td>0.03 µg/L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0-500 µg/L</td>
</tr>
<tr>
<td></td>
<td>Red excitation</td>
<td>0.3 µg/L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;500 µg/L</td>
</tr>
<tr>
<td>Fluorescein Dye</td>
<td>0.01 ppb</td>
<td>0-500 ppb</td>
</tr>
<tr>
<td>Oil - Crude</td>
<td>0.2 ppb***</td>
<td>0-1,500 ppb***</td>
</tr>
<tr>
<td>Oil - Fine</td>
<td>10 ppb*</td>
<td>7,000 ppb*</td>
</tr>
<tr>
<td></td>
<td>10 ppm****</td>
<td>&gt;100 ppm****</td>
</tr>
<tr>
<td>Optical Brighteners</td>
<td>0.6 ppb***</td>
<td>0-2,500 ppb***</td>
</tr>
<tr>
<td>Phycocyanin</td>
<td>2 ppb**</td>
<td>0-4,500 ppb**</td>
</tr>
<tr>
<td>Phycoerythrin</td>
<td>0.1 ppb**</td>
<td>0-750 ppb**</td>
</tr>
<tr>
<td>PTSA Dye</td>
<td>0.1 ppb***</td>
<td>0-650 ppb***</td>
</tr>
<tr>
<td>Rhodamine Dye</td>
<td>0.01 ppb</td>
<td>0-1,000 ppb</td>
</tr>
<tr>
<td>Tryptophan</td>
<td>3 ppb</td>
<td>5,000 ppb</td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.05 NTU</td>
<td>0-1,500 NTU</td>
</tr>
</tbody>
</table>

* 1.5 Naphthalene Disulfonic Disodium Salt
** Quinine Sulfate
*** PTSA (1,3, 6, 8 - Pyrenetetrasulfonic Acid Tetrasodium Salt)
**** BTEX (Benzene, Toluene, Ethylbenzene, Xylenes)
PC Phycocyanin pigment from Prozyme diluted in Deionized water
PE Phycoerythrin pigment from Prozyme diluted in Deionized water

## Physical Dimensions

<table>
<thead>
<tr>
<th></th>
<th>Length x Diameter:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.7” x 0.9”; 14.48 x 2.23 cm (SS or Ti)</td>
</tr>
<tr>
<td></td>
<td>5.7” x 1.25”; 14.48 x 3.18 cm (Delrin)</td>
</tr>
</tbody>
</table>

Weight: 5.0 oz; 142 grams

## Environmental Characteristics

- **Temperature Range:**
  - Ambient: 0 to 50 deg C
  - Water Temp: -2 to 50 deg C
- **Depth Range:** 600 meters
- **Signal Output:** 0 - 5 VDC
- **Supply Voltage Range:** 3 - 15 VDC
- **Power Requirements:** <300mW typical

## Ordering Information

### AVAILABLE INSTRUMENTS

- Blue Green Algae - Phycoerythrin (freshwater) or Phycocyanin (marine)
- CDOM/FDOM
- Chlorophyll in vivo
  - Blue excitation
  - Red excitation
- Crude Oil
- Fluorescent Dye Tracing - Fluorescein, PTSA or Rhodamine
- Refined Fuels
- Turbidity
- Wastewater Monitoring - Optical Brighteners or Tryptophan

**Contact us for Custom Optics**

*Titanium and Plastic Housings also available. Titanium and Plastic withstand corrosion better than stainless steel and are recommended for stationary deployments in highly corrosive environments.*

## Contact Us

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**RELIABLE INSTRUMENTS FOR AN UNRELIABLE WORLD**

S-0060 Rev. AE