SUPERIOR SENSOR TECHNOLOGY
Hydrolab sondes are built with the industry's best sensor technology, to provide high quality data that you can trust.

UNSURPASSED RELIABILITY
Hydrolab sondes are built to withstand the harshest environmental conditions so you can be confident that your data will be correct at every site, every time.

LONG-TERM VALUE
Hydrolab sondes are built to last, easy to use, and simple to maintain—saving you time and money throughout your ownership of the instrument.

Be Right.
The Environment is Worth it.
**MS5**
- Four built-in expansion ports configured to fit your specific needs
- Measures up to 10 parameters simultaneously
- Compact and lightweight 1.75” diameter housing fits into groundwater wells
- Used for attended or unattended monitoring

**DS5**
- Seven built-in expansion ports configured to fit your specific needs
- Measures up to 15 parameters simultaneously
- Capable of measurements using any of Hydrolab’s 15 sensors
- Used for attended or unattended monitoring

**DS5X**
- Ideal for “X-tended” deployments in environments where fouling and sediment are abundant
- Central cleaning system wipes away fouling from adjacent sensors to reduce the maintenance frequency
- Seven built-in expansion ports configured to fit your specific needs
- Measures up to 15 parameters simultaneously

**SURVEYOR**
- Complete set-up capability allows users to leave their laptops in their offices
- Designed specifically for use in severe field conditions, the Surveyor can take a beating on land or in the water and still deliver your data
- Displays data in real-time or can store up to 375,000 measurements
- Oversize screen with backlight allows data to be viewed in any conditions
- Available with optional GPS and Barometric Pressure capabilities

**HYDRAS 3 LT**
- Real-time, multi-parameter time series graphing and vertical profiling
- Simple, point and click calibration of any parameter
- One-click download for field data collection
- User-programmable stability check on each sensor
- Included free with every Series 5 sonde
### Hach LDO®
- Longest lasting calibrations
- Features the best accuracy available for DO measurement
- No membranes so maintenance is simple
- Clark Cell also available

### Conductivity
- Open cell allows reliable measurements in any environmental condition—sediment falls to the bottom and bubbles rise to the top

### pH
- Reference electrode is easily refilled in seconds—indeedent of the pH sensor
- pH sensor does not need replacement when reference electrode is depleted; simply refill the reference

### Turbidity:
**Self-Cleaning**
- User-programmable self-cleaning system can perform up to 10 cleaning cycles before each reading
- 3000 NTU range allows Turbidity tracking even during rain storms or other events that could cause abnormally high readings
- 4-Beam and Standard Turbidity also available

### Chlorophyll a
- Ultra-compact size designed by Turner Designs specifically for integration into Hydrolab sondes
- Provides the most accurate measurement of Chlorophyll a because of electronic filtration of ambient light, efficient optical coupling, and quality optical components.

### Blue-Green Algae
- Real-time measurement identifies potential algal blooms before they become problematic, allowing time for corrective action
- Ultra-compact size designed by Turner Designs specifically for integration into Hydrolab sondes
- Provides the most accurate measurement of phycocyanin or phycoerythrin because of electronic filtration of ambient light, efficient optical coupling, and quality optical components

### Depth
- Optimized for depths down to 10m, 25m, 100m, or 200m

### Total Dissolved Gas
- Real-time measurement indicates water supersaturated with atmospheric gases, which can cause gas bubble gill disease in aquatic organisms

### Rhodamine WT
- Ultra-compact size designed by Turner Designs specifically for integration into Hydrolab sondes
- Provides the most accurate measurement of Rhodamine WT because of electronic filtration of ambient light, efficient optical coupling, and quality optical components

### Ion-Selective Electrodes
- Available for monitoring Ammonia/Ammonium, Nitrate, or Chloride

### PAR
- Provides a real-time measurement of sunlight intensity, which influences biota that rely on photosynthesis for nutrition

### Temperature
- Provides critical compensation for Dissolved Oxygen, Conductivity, pH, and nutrient sensors
- Included with every sonde
## Sensors

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Range</th>
<th>Accuracy</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hach LDO™</td>
<td>0 to 60 mg/L</td>
<td>± 0.1 mg/L @ &lt; 8 mg/L; ± 0.2 mg/L @ &gt; 8 mg/L</td>
<td>0.01 mg/L</td>
</tr>
<tr>
<td>Polarographic DO</td>
<td>0 to 50 mg/L</td>
<td>± 0.2 mg/L @ &lt; 20 mg/L; ± 0.6 mg/L @ &gt; 20 mg/L</td>
<td>0.01 mg/L</td>
</tr>
<tr>
<td>Conductivity</td>
<td>0 to 100 mS/cm</td>
<td>± 0.5% of reading; ± 0.001 mS/cm</td>
<td>4 digits</td>
</tr>
<tr>
<td>pH</td>
<td>0 to 14 pH units</td>
<td>± 0.2 units</td>
<td>0.01 units</td>
</tr>
<tr>
<td>Turbidity, Self-Cleaning</td>
<td>0-3000 NTU</td>
<td>Compared to StabCal 1% up to 100 NTU; 3% from 100-400 NTU; 5% from 400-3000 NTU</td>
<td>0.1 NTU from 0-400 NTU; 1 NTU for &gt;400 NTU</td>
</tr>
<tr>
<td>Turbidity, 4-Beam</td>
<td>0-1000 NTU</td>
<td>5% of reading; or ± 1 NTU</td>
<td>0.1 NTU from 0-100 NTU; 1 NTU for &gt;100 NTU</td>
</tr>
<tr>
<td>Depth</td>
<td>0 to 10m (Vented Level)</td>
<td>± 0.003 meters</td>
<td>0.001 meters</td>
</tr>
<tr>
<td>Chlorophyll a</td>
<td>Dynamic Range</td>
<td>± 3% for signal level equivalents of 1 ppb rhodamine WT dye or higher using a rhodamine sensor</td>
<td>0.01 µg/L</td>
</tr>
<tr>
<td>Blue-Green Algae</td>
<td>Dynamic Range</td>
<td>± 3% for signal level equivalents of 1 ppb rhodamine WT dye or higher using a rhodamine sensor</td>
<td>20 cells/mL</td>
</tr>
<tr>
<td>Ion Selective Electrodes</td>
<td>0 to 100 mg/L-N</td>
<td>Greater of ± 5% of reading, or ± 2 mg/L-N</td>
<td>0.01 mg/L-N</td>
</tr>
<tr>
<td>Nitrate</td>
<td>Max Depth: 15 meters</td>
<td>Greater of ± 5% of reading, or ± 2 mg/L-N</td>
<td>0.01 mg/L-N</td>
</tr>
<tr>
<td>Chloride</td>
<td>Max Depth: 15 meters</td>
<td>Greater of ± 5% of reading, or ± 2 mg/L</td>
<td>4 digits</td>
</tr>
<tr>
<td>TDG (Total Dissolved Gas)</td>
<td>400 to 1300 mmHg</td>
<td>± 0.1% of span</td>
<td>1.0 mmHg</td>
</tr>
<tr>
<td>ORP</td>
<td>-999 to 999 mV</td>
<td>± 20 mV</td>
<td>1 mV</td>
</tr>
<tr>
<td>Rhodamine WT</td>
<td>Dynamic Range</td>
<td>± 3% for signal level equivalents of 1 ppb rhodamine WT dye or higher using a rhodamine sensor</td>
<td>0.01 ppb</td>
</tr>
<tr>
<td>PAR</td>
<td>0 to 10,000 µmol s⁻¹m⁻²</td>
<td>± 5% of reading, or ± 1 µmol s⁻¹m⁻²</td>
<td>1 µmol s⁻¹m⁻²</td>
</tr>
<tr>
<td>Temperature</td>
<td>-5 to 50°C</td>
<td>± 0.10°C</td>
<td>0.01°C</td>
</tr>
</tbody>
</table>

### Sondes

**Size**

- **DataSonde:** Outer diameter – 3.5"/8.9 cm, Length – 23"/58.4 cm
- **MiniSonde:** Outer diameter – 1.75"/4.4 cm, Length – 29.5"/74.9 cm (with battery pack)

**Weight**

- **DataSonde:** 7.4 lbs/3.35 kg (typical)
- **MiniSonde:** 2.9 lbs/1.3 kg (typical with battery pack)

**Computer Interface**

- RS-232, SDI-12, RS-485

**Battery Supply**

- **DataSonde:** 8 C batteries
- **MiniSonde:** 8 AA batteries

**Operating Temperature**

-5 to 50°C

**Maximum Depth**

225 m