Overview

The CRS451/CRS456 is unvented; therefore it is monitoring sealed gage pressure. For maximum accuracy, the data should be corrected for barometric pressure.

The CRS451’s 316L stainless-steel case can be submerged in most canals, wells, ponds, lakes, and streams. The CRS456’s rugged titanium case allows it to be used in saltwater or other harsh environments.

Benefits and Features

- Quality construction ensures product reliability
- Sensors and data-collection features in one instrument case
- Free customer-friendly software for communication, configuration, data collection
- Fast scan rate
- Large data storage capacity
- Fully temperature-compensated
- Long battery life
- Multiple logging/scanning modes: Standard, Delta, Logarithmic
- Rugged stainless-steel or titanium case protects piezoresistive sensor

HydroSci software simplifies the process of configuring the sensor to monitor surface water, ground water, or a standard pump test (shown above).
Options and Accessories

Options
- Accuracy: standard 0.1% full-scale range TEB
- Pressure ranges: up to 7.25 psi, 14.5 psi, 29 psi, 72.5 psi, or 145 psi
- Nose cone: standard, weighted (for easier submersion), or ¼ inch NPT (for closed-pipe applications)

Accessories
- Suspension Cable Kit (pn 29221-L)
- Heyco Cable Grip (pn 31648) for mating with a 1 in. PVC pipe

Specifications

- Power Requirements: Internal user replaceable lithium battery
- Measurement Time: < 1 s
- Output: micro USB
- Internal Data Collection Memory: 4 MB
- Logging/Scanning Modes: Standard, Delta, Logarithmic
- Battery life: 5+ years when logging interval is once per hour
- Diameter: 2.22 cm (0.875 in)
- Length: 22.23 cm (8.75 in)
- Weight: 230 g (0.51 lb)
- Operating Temperature Range: 0° to +60°C
- Dry Storage Temperature Range: -30° to +80°C
- Measurement Ranges:

<table>
<thead>
<tr>
<th>Pressure (psi)</th>
<th>Pressure (kPa)</th>
<th>Depth of fresh water</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 7.25</td>
<td>0 to 50</td>
<td>0 to 5.1 m (16.7 ft)</td>
</tr>
<tr>
<td>0 to 14.5</td>
<td>0 to 100</td>
<td>0 to 10.2 m (33.4 ft)</td>
</tr>
<tr>
<td>0 to 29</td>
<td>0 to 200</td>
<td>0 to 20.4 m (67 ft)</td>
</tr>
<tr>
<td>0 to 72.5</td>
<td>0 to 500</td>
<td>0 to 50.9 m (167 ft)</td>
</tr>
<tr>
<td>0 to 145</td>
<td>0 to 1000</td>
<td>0 to 102 m (334.5 ft)</td>
</tr>
</tbody>
</table>

- Resolution: 0.0035% FS
- Overpressure: 2 x pressure range

Accuracy
- Water Level: 0.1% FS TEB
- Temperature: ±0.2°C

Power Consumption
- Quiescent: < 80 μA
- Measurement/Communication Current: 4 mA for 1 s measurement

Distance from pressure sensor interface (black line etched on housing) to:
- End of Standard Nose Cone: 2.3 cm (0.9 in.)
- End of NPT Nose Cone: 2.54 cm (1 in.)
- End of Weighted Nose Cone: 9.9 cm (3.9 in.)

Options and Accessories

For more information about the options and accessories, refer to: www.campbellsci.com/crs451-ordering or www.campbellsci.com/crs456-ordering

Total Error Band (TEB) includes the combined errors due to nonlinearity, hysteresis, nonrepeatability, and thermal effects over the compensated temperature range, per ISA S51.1.

WARNING: Sensor could be damaged if encased in frozen liquid.