



CRS451V

Vented Water-Level Recording Sensor—Stainless Steel



Pressure Transducer Combined with a Recorder

High resolution and accuracy

Overview

The CRS451V consists of a submersible water-level and water-temperature sensor with its own time clock and memory to store the collected data—in a compact stainless-steel case. This data logging capability frees users to place the sensor in remote sites and let it collect data for long periods. HydroSci software is included and elegantly

supports test setup, data retrieval, and data display. Long battery life and rugged construction mean you can trust the CRS451V to collect important data. Low cost and ease of use make it a good choice in a variety of applications. The CRS456V is the same as this, but with a titanium case.

Benefits and Features

- › Rugged stainless-steel case protects piezoresistive sensor
- › Fully temperature-compensated
- › Quality construction ensures product reliability

Technical Description

The CRS451V has several pressure range options.

HydroSci software is available for [download](#). This software simplifies the process of configuring the CRS451V. Users can

configure the CRS451V to monitor surface water, ground water, or a standard pump test.

HydroSci software will display the data in tabular or graphical formats.

Specifications

Venting	Vented
Measurement Time	< 1.0 s
Input Voltage	6 to 16 Vdc
Output Options	micro USB
Internal Data Collection Memory	4 MB

Logging/Scanning Modes	Standard, Delta, Wave, Logarithmic
Resolution	0.0035% FS
Dry Storage Temperature Range	-10° to +80°C WARNING: Sensor could be damaged if encased in frozen ice.



Operating Temperature Range	0° to 60°C WARNING: Sensor could be damaged if encased in frozen ice.
Overpressure	2 x pressure range
Power Requirements	Internal user-replaceable lithium battery
Battery Life	5 years (when logging interval is once per hour; approximately 40,000 measurements)
Body Material	316L stainless steel
Water-Level Accuracy	±0.1% full-scale-range TEB Includes the combined errors due to nonlinearity, hysteresis, nonrepeatability, and thermal effects over the compensated temperature range, per ISA S51.1.
Temperature Accuracy	±0.2°C
Ingress Protection	Exceeds IP68

Diameter	2.22 cm (0.875 in.)
Length	22.23 cm (8.75 in.)
Weight	230 g (0.51 lb)

Power Consumption

Quiescent	< 80 µA
Measurement/ Communication	4 mA (1 s measurement)

Measurement Ranges at Fresh Water Depths

0 to 5.1 m (16.7 ft)	› 0 to 7.25 psi › 0 to 50 kPa
0 to 10.2 m (33.4 ft)	› 0 to 100 kPa › 0 to 14.5 psi
0 to 20.4 m (67 ft)	› 0 to 200 kPa › 0 to 29 psi
0 to 50.9 m (167 ft)	› 0 to 500 kPa › 0 to 72.5 psi
0 to 102 m (334.5 ft)	› 0 to 1000 kPa › 0 to 145 psi

For comprehensive details, visit: www.campbellsci.eu/crs451v 



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