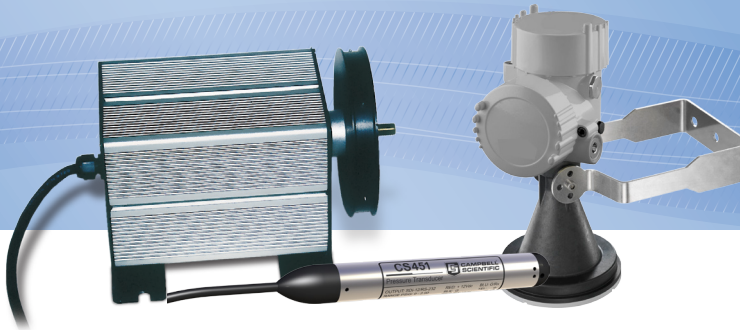




# WATER LEVEL SENSORS

Pressure Transducers, Ranging Sensors, Shaft Encoders & Bubblers

*Rugged, Reliable, and Ready for any Application*



Water Level Sensors are used in a wide array of applications, in many natural and industrial environments, including streams, watersheds, wells, caves, water/wastewater treatment plants, aquaculture opera-

tions, landfills, and processing plants. Each sensor provides research grade accuracy and reliability.




## MAJOR SPECIFICATIONS

	Output	Measurement Range	Accuracy	Current Drain
<p><b>CS451</b>   Pressure Transducer/ Temperature Probe In stainless-steel case for water level measurements</p> 	SDI-12 RS-232	0 to 2.9 psig <sup>a</sup> 0 to 7.25 psig 0 to 14.5 psig 0 to 29.0 psig 0 to 72.5 psig 0 to 145 psig	±0.1% ±0.05% <sup>a</sup>	Quiescent: <50 µA  Measurement/ Communication: 8 mA (1-s measurement)  Maximum: 40 mA
<p><b>CS456</b>   Pressure Transducer/ Temperature Probe In titanium case for water level measurements in saltwater or harsh environments</p> 	SDI-12 RS-232	0 to 2.9 psig <sup>a</sup> 0 to 7.25 psig 0 to 14.5 psig 0 to 29.0 psig 0 to 72.5 psig 0 to 145 psig	±0.1% ±0.05% <sup>a</sup>	Quiescent: <50 µA  Measurement/ Communication: 8 mA (1-s measurement)  Maximum: 40 mA
<p><b>CRS451</b>   Water-Level Recording Sensor In stainless-steel case for water level measurements</p> 	micro USB	0 to 7.25 psig 0 to 14.5 psig 0 to 29.0 psig 0 to 72.5 psig 0 to 145 psig	±0.1%	Quiescent: < 80 µA  Measurement/ Communication: 4 mA (1 s measurement)
<p><b>CRS456</b>   Water-Level Recording Sensor In titanium case for water level measurements in saltwater or harsh environments</p> 	micro USB	0 to 7.25 psig 0 to 14.5 psig 0 to 29.0 psig 0 to 72.5 psig 0 to 145 psig	±0.1%	Quiescent: < 80 µA  Measurement/ Communication: 4 mA (1 s measurement)
<p><b>CS475</b>   Radar- Ranging Sensor<sup>b</sup> For water level measurements</p> 	SDI-12	50 mm to 20 m (2 in. to 65 ft)	±5 mm (±0.2 in.) over entire measurement range	Sleep: 4.7 mA Measurement: 14 mA

More info: 435.227.9050

[campbellsci.com/water-level-flow/](http://campbellsci.com/water-level-flow/)



	<i>Output</i>	<i>Measurement Range</i>	<i>Accuracy</i>	<i>Current Drain</i>
<b>CS476</b>   Radar-Ranging Sensor <sup>b</sup> For water level measurements 	SDI-12	50 mm to 30 m (2 in. to 98 ft)	±3 mm (±0.1 in.) over entire measurement range	Sleep: 4.7 mA Measurement: 14 mA
<b>CS477</b>   Radar-Ranging Sensor <sup>b</sup> For water level measurements 	SDI-12	400 mm to 70 m (16 in. to 230 ft)	±15 mm (±0.6 in.) over entire measurement range	Sleep: 4.7 mA Measurement: 14 mA
<b>SR50A</b>   Sonic Ranging Sensor For water level measurements 	SDI-12 RS-232 RS-485	1.6 to 32.8 ft (0.5 to 10 m)	±1 cm (0.4 in.) or 0.4% of distance to target (whichever is greatest); requires external temperature compensation	Active (typical): 250 mA  Quiescent SDI-12 Mode: < 1.0 mA  Quiescent RS-232/ RS485 Modes: <1.25 mA (≤9600 bps) <2.0 mA (>9600 bps)
<b>CS410</b>   Shaft Encoder For water level measurements 	Pulse	N/A	0.003 m (0.01 ft)	0.5 mA
<b>CS471</b>   Compact Bubbler For water level measurements 	SDI-12 RS-485 4 to 20 mA	0 to 50 ft	0 to 4.6 m (0 to 15 ft): ±0.003 m (0.01 ft)  4.6 to 10.7 m (15 to 35 ft): ±0.065% of reading  10.7 to 15.2 m (35 to 50 ft): ±0.006 m (0.02 ft)	Typical Measurement/ Communication:  320 mAhr/day (1-min. query interval)  25 mAhr/day (15-min. query interval)

<sup>a</sup> The 0 to 2.9 psig range is not available for the high accuracy option for the CS451 and CS456 pressure transducers.

<sup>b</sup> The CS475, CS476, and CS477 are FCC approved for outdoor use (FCC IC number M01PULS616263)