



## CS547A-L

### Water Conductivity and Temperature Probe



## Corrosion Resistant

Epoxy housing is durable and easy to clean

### Overview

The CS547A probe monitors the electrical conductivity (EC) and temperature of water. EC is measured with three cylindrical stainless-steel electrodes mounted in an epoxy housing. The electrode configuration eliminates ground loop problems associated with sensors in electrical contact with earth ground. The electrodes are ac coupled, and a bipolar excitation is applied. This reduces electrochemical reactions,

minimizes corrosion, and extends the probe's life. Temperature is sensed with a thermistor.

The CS547A is shipped with a cell constant calibrated in a 0.01 molal KCl solution at 25°C. The solution has an EC of 1.408 mS cm<sup>-1</sup>.

### Benefits and Features

- › Compatible with most Campbell Scientific data loggers
- › Easy to clean
- › Corrosion resistant
- › Rounded ends facilitate installation and removal
- › Compatible with AM16/32-series multiplexers allowing measurement of multiple sensors
- › Weighted option available for stand-alone submersion

### Detailed Description

The CS547A measures temperature with a thermistor. Electrical conductivity (EC) is measured with three cylindrical stainless-steel electrodes mounted in an epoxy housing. The electrode configuration eliminates ground loop problems associated with sensors in electrical contact with earth ground. The electrodes are ac coupled, and the data logger applies a

bipolar excitation. This process reduces electrochemical reactions, minimizes corrosion, and extends the probe's life.

The CS547A is easy to clean and resistant to corrosion. It has rounded ends to facilitate installation and removal. The CS547A is shipped with a cell constant calibrated in a 0.01 molal KCl solution at 25°C. The solution has an EC of 1.408 mS cm<sup>-1</sup>.

## Specifications

Output	Analog (requires A547 interface)
Conductivity Measurement Range	~0.005 to 7 mS/cm
Temperature Measurement Range	0° to 50°C
Conductivity Accuracy	› ±5% of reading (for 0.44 to 7.0 mS cm <sup>-1</sup> range) › The EC accuracy is in a KCl and Na <sub>2</sub> SO <sub>4</sub> , NaHCO <sub>3</sub> , and NaCl Standard Solutions @ 25°C.
Temperature Polynomial Linearization Error	Typically < 0.1°C (over 0° to 48°C)
Thermistor Interchangeability	Typically < 0.2°C (over 0° to 50°C)

Wetted Materials	Epoxy housing, 316 stainless-steel rings, polyurethane cable
pH Operating Range	Solution pH of less than 3.0 or greater than 9.0 may damage the stainless-steel housing.
Operating Temperature Range	0° to 50°C
Depth Rating	305 m (1000 ft) maximum
Dimensions	8.9 x 2.54 x 1.9 cm (3.5 x 1 x 0.75 in)
Weight	› 45 g (2 oz) › 120 g (4.2 oz) with 1.22 m (4 ft) cable
Weighted Cable Weight	80 g (2.8 oz)

For comprehensive details, visit: [www.campbellsci.com/cs547a-l](http://www.campbellsci.com/cs547a-l) 



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