

**CS547A***Water Conductivity and Temperature Probe*

## Corrosion Resistant

Epoxy housing is durable and easy to clean

### Overview

The CS547A is a water quality probe that measures both electrical conductivity (EC) and temperature. It connects to a Campbell Scientific

datalogger via the A547 interface. This probe is compatible with most Campbell Scientific dataloggers.

### Benefits and Features

- › Compatible with AM16/32-series multiplexers allowing measurement of multiple sensors
- › Easy to clean
- › Corrosion resistant
- › Weighted option available for stand-alone submersion

### Technical 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

datalogger 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>.

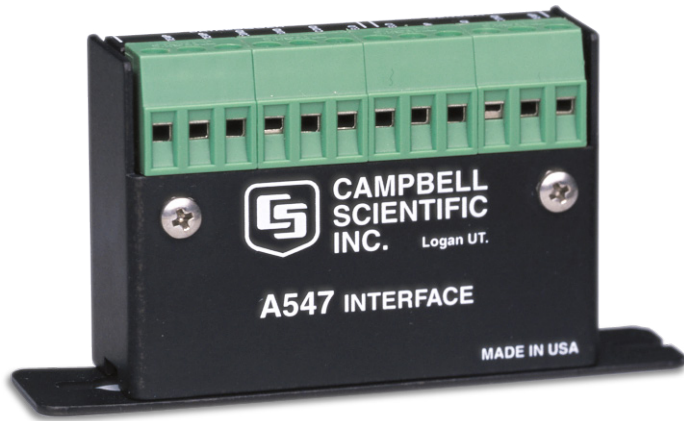
More info: 435.227.9050

[www.campbellsci.com/cs547a-l](http://www.campbellsci.com/cs547a-l)



## A547

The A547 Conductivity Interface contains the blocking capacitors and bridge completion resistors necessary for the conductivity measurement. One A547 is required for each CS547A when used directly with the datalogger; multiple CS547A probes can be used with a AM16/32B multiplexer and one A547.



The A547's case has mounting flanges for attachment to the backplate of a Campbell Scientific environmental enclosure.

## Ordering Information

### Conductivity and Temperature probe

**CS547A -L** Conductivity and temperature probe with user-specified cable length. Enter the cable length, in feet, after the -L. Must choose a cable termination option, and use an A547 Conductivity Interface (see below).

### Weighted Cable Options (choose one)

- NW** No Weight on Cable. This option is recommended when the CS547A will be secured to a fixed or retractable object.
- CW** 2.7 oz. Weight added to Cable. The extra weight facilitates submersion of the CS547A, and is required for stand-alone submersion.

### Cable Termination Options (choose one)

- PT** Cable terminates in stripped and tinned leads for direct connection to a A547's terminals.
- PW** Cable terminates in connector for attachment to a prewired enclosure.

### Common Accessories

- A547** CS547A Conductivity Interface that contains blocking capacitors and bridge completion resistors necessary for measurement of the CS547A.
- 7421** Split Mesh Cable Grip

## CS547A Specifications

- Conductivity Measurement Range: ~0.005 to 7.0 mS/cm
- Temperature Measurement Range: 0° to 50°C
- Conductivity Accuracy\*  $\pm 5\%$  of reading (for 0.44 to 7.0 mS cm<sup>-1</sup> range)
- 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
- Minimum Pipe Inner Diameter that CS547A Fits: 2.79 cm (1.1 in)
- Depth Rating: 305 m (1000 ft) maximum
- Dimensions: 2.5 x 1.9 x 8.9 cm (1.0 x 0.75 x 3.5 in)
- Weight with 4 ft cable: 120 g (4.2 oz)
- Weighted Cable Weight: 80 g (2.8 oz)

## A547 Specifications

- Operating Temperature Range: -15° to +50°C
- Dimensions: 6.4 x 4.6 x 2.3 cm (2.5 x 1.8 x 0.9 in)
- Dimensions with Mounts: 8.9 x 4.6 x 2.3 cm (3.5 x 1.8 x 0.9 in)
- Weight: 45 g (2 oz)

\*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.



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