

# CS525

ISFET pH Probe



Campbell Scientific's CS525 pH probe provides reliable, accurate pH measurements that are fully temperature compensated. This probe makes general pH measurements in aqueous or semi-solid solutions, and can be submersed or inserted into tanks, pipelines, and open channels.

The CS525 uses SENTRON's high-tech, Ion Sensitive Field Effect Transistor (ISFET) semi-conductor as its pH-sensitive element, and includes a silver/silver chloride - potassium chloride reference system. The ISFET technology is the most powerful pH monitoring technology available today. This technology considerably reduces the number of acidic or alkaline errors in extreme pH conditions. It allows the CS525 to monitor pH in liquids containing high solids, aggressive chemicals, or biological materials that would clog or contaminate the junction of the traditional glass-bulb pH probes.

The CS525's rugged design makes it suitable for just about any liquid pH-monitoring application, from laboratory to harsh field applications. The probe's electronics are safely embedded in a durable PEEK body. Elimination of the glass-bulb removes the possibility of broken glass, making the CS525 more durable and safer to use.

## Features/Benefits

- Innovative ISFET pH-sensing element used that makes better measurements in extreme pH conditions
- No clogging or contamination of junction
- Easily cleaned
- More rugged than the traditional glass electrode pH probes allowing the CS525 to be deployed in the field for longer time periods
- Compatible with all Campbell Scientific dataloggers (including the CR200 series)
- Designed and manufactured under stringent quality control conditions in an ISO 9001 environment
- Each sensor individually tested
- CE compliant
- Fully temperature compensated



[www.campbellsci.com/cs525](http://www.campbellsci.com/cs525)

## Ordering Information

### pH Probe

**CS525-L** ISFET pH Probe with user-specified cable length. Enter length, in feet, after the -L. Must choose a cable termination option (see below)

### Cable Termination Options (choose one)

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

### Solutions

- 25587** pH4 Buffer Solution (500 ml container). Two or more different buffer solutions are required for calibration.
- 25586** pH7 Buffer Solution (500 ml container). Two or more different buffer solutions are required for calibration.
- 25588** pH10 Buffer Solution (500 ml container). Two or more different buffer solutions are required for calibration.
- 16349** KCl solution used for cleaning (4 oz container)

### Accessories

- 7421** Split Mesh Cable Grip
- VDIV2:1** 2-to-1 Voltage Divider required when using a CR200-series, CR500, CR510, or CR10(X) datalogger..

## Specifications

<b>pH Range:</b>	0 to 14
<b>Power Requirements:</b>	4.5 to 5.5 Vdc
<b>Current Consumption:</b>	2 mA nominal
<b>Measurement Time:</b>	200 ms < $t_{67\%}$ < 500 ms
<b>Outputs:</b>	0 to +5000 mV; +2700 mV at pH7 and 25°C with a sensitivity of 270 mV to 330 mV/pH at 25°C
<b>Accuracy:</b>	±0.1 pH with two point calibration
<b>Operating Temperature:</b>	0° to 70°C
<b>Allowed Water Pressure:</b>	0 to 30 kPa (0 to 45 psi)
<b>Maximum Cable Length:</b>	30 m (100 ft)
<b>Cable Type:</b>	two-twisted pair, 22 AWG cable with Santoprene® jacket
<b>Sensor Material:</b>	polyaryletheretherketone (PEEK)
<b>Dimensions</b>	
<b>Length:</b>	190 mm (7.48 inches)
<b>Diameter:</b>	16mm (0.63 inches)
<b>Weight w/10 ft cable:</b>	318 g (11.2 oz.)

