

pH SENSORS

MODELS PH100 & PH300

The Stevens-Greenspan pH Sensors provide highly accurate pH readings independent of temperature.

The proven gel-filled double junction sensor tolerates rough handling while maintaining long term accuracy.

Coupled with robust construction and a fully submersible design, the sensors provide excellent performance in a wide range of demanding measurement applications.



Make more accurate pH measurements with Stevens-Greenspan's state of the art pH sensor

PH100

The Stevens-Greenspan pH Sensor offers a unique combination of advanced features:

- n Innovative, optically isolated signal conditioning electronics ensure true and accurate readings at all times.
- n Field proven gel-filled double junction electrode provides long term accuracy.
- n Optical isolation of signal conditioning electronics enables operation in combination with other sensors without compromising performance.
- n Low power energy saving design enables long term operation in remote data logging applications.
- n Optional on-board data logger with a wide range of sophisticated logging features enables long term unattended operation.

Stevens-Greenspan Reliability

The Stevens-Greenspan pH Sensor combines a rugged gel-filled electrode and robust, sealed construction to offer unparalleled reliability. Designed for low power consumption, the sensor can be operated from remote power sources for extended periods. Field experience has shown the Stevens-Greenspan pH Sensor can be left unattended for up to three months. The high reliability of Stevens-Greenspan sensors means critical measurements are not lost through sensor down time. Time wasting unscheduled site visits are therefore minimized.

Stevens-Greenspan Accuracy

At the heart of the Stevens-Greenspan pH Sensor is a gel-filled electrochemical sensor which is very selective and sensitive to hydrogen ions. Coupled earth loop currents, a frequent source of errors with high impedance pH probes, are eliminated through the use of optically isolated signal conditioning electronics. Built-in temperature compensation removes temperature related errors.

Stevens-Greenspan pH sensors have been used for borehole observations, tidal and estuarine studies, effluent monitoring, river and stream studies.

A 316-grade stainless steel tube with o-ring sealed delrin end fittings provides the PH100 and PH300 with the ruggedness required for the most demanding measurement environments. The PH100 is built into a compact 1.3in diameter tube while the PH300 utilizes a robust 1.8in diameter package.



RELIABILITY • ACCURACY

Log accurate pH measurements cost-effectively with Stevens-Greenspan's versatile intelligent pH sensor

PH300

Stevens-Greenspan's Intelligent pH Sensor model PH300 is a complete, self-contained pH measurement and data logging system. The PH300 adds sophisticated and versatile data acquisition, control and communications capabilities to Stevens-Greenspan's standard PH100 pH Sensor. Standard features of the PH300 include:

- n Storage of measured data within the sensor for long periods.
- n Easy configuration of logging parameters and uploading of logged data.
- n Automatic transfer of data to a central office simply by attaching a data modem and mobile phone.
- n Improved linearity and accuracy through the use of microprocessor based compensation.
- n Facility to set alarm conditions which can trigger additional measuring equipment.
- n Lithium battery pack option for fully self-contained operation.

The added features of the PH300 are accommodated within the same **compact sensor body** used for the PH100. A separate data logger and weatherproof housing are not required, eliminating the added deployment costs normally associated with providing a remote data logging capability, Simplified wiring means easier installation and maintenance also.

Sophisticated **communication features** in the PH300 make remote site logging of water pH easier than ever. In combination with an external data modem and mobile phone, the PH300 enables remote uploading of logged data and re-programming of logging schedules. In addition the PH300 can respond to user-programmed **alarm conditions** by triggering an associated sensor or by calling one of four preset phone numbers with a user-programmed alarm message.

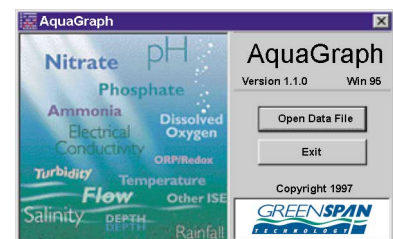
The alarm output can typically be set to trigger pumps or dousing processes where water chemistry is critical as in aquaculture environments.

The PH300 can be powered using either external batteries (via the sensor cable) or with Stevens-Greenspan's **optional lithium battery pack**, which can be fitted as an extension to the sensor body, making a fully self-contained measurement and logging system.

With all the features of a conventional data acquisition system in one compact package, the Stevens-Greenspan 300-Series intelligent sensors provide the most cost-effective solution available today where combined measurement and data collection functions are required.

Logging parameters and schedules are set up using Stevens-Greenspan's easy to use graphical software package, Smartcom, which runs on IBM compatible PCs.

Graphical representation of data can be made using Stevens-Greenspan's Aquagraph software. The software makes graphing your data simple and allows data to be exported in different formats.



Specifications

Model PH100

Model PH300

Range	0–14 pH	same as PH100
Resolution	0.001 pH	same as PH100
Accuracy	0.2 pH	same as PH100
Temperature range	0–50 °C	same as PH100
Temperature compensation	0–50 °C	same as PH100
Sensor type	Gel-filled Ag/AgCl reference	same as PH100
Output	4–20mA 3 wire	RS232
Supply voltage	8–15V • Reverse polarity protected • Surge protected to 2kV	8-15V
Warm up time to stable reading	2 secs	2 secs
Dimensions	length 9.3in (235mm) OD 1.3in (32mm) Stainless OD 1.5in (38mm) Delrin	length 13.4in (340mm) OD 1.8in (45mm) Stainless OD 1.9in (48mm) Delrin optional battery pack adds extra 10.25in (260mm) to length
Weight	8.5oz (240g) Delrin 9.5oz (270g) Stainless	17.6oz (500g) Delrin 22.2oz (630g) Stainless
Wetted materials	316 stainless steel, Delrin	same as PH100
Software supplied	AQUAGRAPH, SMARTCOM	

Standard configuration

- Sensor calibrated to 0–14 pH
- Cable to requested length and terminated with data connector and tinned copper wires
- Probe cover for pH buffer

Options

- A complete Delrin body can be provided for use in corrosive water

Calibration

In order to satisfy customer QA requirements, Stevens-Greenspan provides a calibration service to ensure instruments are periodically checked.

Technical Support When You Need It

The correct choice of sensor should be supported by professional advice to ensure long term success in the field. **Stevens-Greenspan Technical Services** is dedicated to customer support and provides assistance in the selection, installation, deployment and commissioning of sensors with a full range of training and consulting services.

A full technical support and field advice service can be accessed by calling Stevens at 800 452 5272.

All Stevens-Greenspan products are designed, developed and manufactured in Australia, can be supplied at short notice and can be customized to meet most requirements.

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