

## THE NEXT GENERATION

### Self Cleaning Flat Surface pH/ORP Electrodes

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Resist Coating

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Resist Abrasion

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Modular Plug and Play

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Configurable

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Enhanced ERP Reference System

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PPS Construction

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# **Sensorex**<sup>®</sup>

**Knowledge and Experience  
You Can Depend On.**

## **S8000 Series pH/ORP Electrode Platform**

### **LIQUID ANALYTICAL SOLUTIONS**

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Modular Flat Surface pH/ORP Electrodes

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Configurable for In-line or Submersion Use

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Optional plug-in Electronic Interfaces

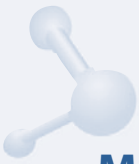
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Enhanced Sensorex ERP Reference System

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REDOX, HF and Low Ioninc Solution Options

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## Modular, Flexible, Configurable PPS Construction



## The S8000 Series electrode cartridge

### Features

- Same electrode for in-line submersion
- Enhanced ERP reference system
- Proven flat surface technology
- Self cleaning in turbulent flow
- Resists coating and abrasion



*Installation into Flow Cell for in-line installations*





# Sensorex®



## NEW S8000 SERIES PLATFORM Next Generation Flat Surface Self-Cleaning pH and ORP (REDOX) Electrodes

***Sensorex, has shaped the pH sensing industry as the leader in flat surface pH and ORP measurement technology with over 1 million sensors in service.***

The S8000 series flat surface self cleaning electrode platform is designed for versatility and flexibility. You purchase only the components you need, and can adapt what you have to changing installation needs or interface options.

The sensor utilizes Sensorex's proven flat surface self cleaning technology. The reference system has been enhanced with Sensorex's ERP technology which provides a complex path which protects the reference in the presence of interacting ions such as proteins, silver and sulfides that interact with silver or chloride. Heavy duty high temperature reference gels offer protection against thermal breakdown of the gel. The same electrode is used for in-line or submersion applications and is constructed in a chemically resistant PPS body.

Current installed S650CD submersion installations utilizing S653 or S653TC vintage cap/cables, can utilize an EA adapter to interface the new 8000 series sensor without replacing the original cable assembly.

There are 2 choices for new submersion installations. A simple non TC submersion EA891 interface when no ATC is required. For installations requiring solution grounds and/or ATC (automatic temperature compensation), the main EA899TC interface should be used.

In-line mounting is accomplished using the main EA899 or EA899TC interface along with the FC800 flow cell. The main EA interface can be ordered with or without ATC elements.

For applications which require more than a direct electrode output, plug in electronic modules are available.

The first three available are:

- a. Battery powered unity gain module EM800
- b. Battery powered differential module EM801
- c. Blind 2 wire 4-20 mA transmitter **EM802/pH** or EM802/ORP

Cap/cables are available in two standard lengths, 10 feet and 25 feet. Both cap cable utilize an 8 pin connector.

### ***Want to change from in-line to submersion or visa-versa?***

No problem, use most or all of the parts you currently have and just order any additional modular parts you may need.

### ***Need to change the signal from a direct electrode output to 4-20mA?***

No problem, just order the 4-20mA module and plug it between the interface and cap cable.

If you prefer an independent pH or ORP transmitter for local display, our TX100 transmitter can provide this solution, or you can interface your S8000 platform to your favorite make and model of instrumentation.

**The S8000 series platform is your liquid analytical solution for pH and ORP**

## Typical Configurations

1.



S8000CD Electrode + simple submersion adapter EA891 + coax cap/cable S853

2.



S8000CD Electrode + ATC solution ground interface adapter EA899TC + multi conductor S855 cap/cable

3.



S8000CD Electrode + ATC solution ground interface adapter EA899TC + Unity gain amplifier module EM800 + Coax cap/cable S853

## Remote 4-20mA 2-Wire pH/ORP Transmitter Model TX100

If the blind fixed 4-20mA plug in module does not suit your requirements, the Model TX100 pH/ORP transmitter offers a full display, zero and span digital calibration, isolated 4-20mA output, ATC capabilities, rangeability, and more. Designed for wall, pipe or panel mount. Perfect for PLC and other 4-20mA input devices.

### Specifications

<b>Measuring Range:</b>	(pH) 0.00 to 14.00pH, 0.01 pH resolution, +/- 0.01 accuracy
<b>Measuring Range:</b>	(ORP/mV) -1999mV to 1999mV, 1mV resolution, +/- 2mV accuracy
<b>Temperature Range:</b>	-20 degC to 110 degC / -4 degF to 230 degF, 0.1 degC/F resolution
<b>Current Output:</b>	Range 2.00mA to 24mA , .01mA Resolution, +/-0.005mA accuracy, 500V input/output isolation
<b>Enclosure:</b>	NEMA 1,4,4X, 6, 12, 13 IP68, ABS case with membrane touchpad HWD: 3.9" (99.1 mm) x 3.9" (99.1 mm) x 2.9" (74.7mm)
<b>Weight:</b>	approx. 1lb (.45kg)
<b>Mounting Options:</b>	Wall, Panel, Pipe and Din Rail.
<b>Conduit Openings:</b>	2 each 3/8" opening cordgrips included.
<b>Ambient Temperature:</b>	Transmitter Service, 0 degC to 60degC / 32 degF to 140 degF
<b>Ambient Humidity:</b>	0 to 95%, non-condensing
<b>Location:</b>	Designed for non-hazardous areas
<b>Temperature:</b>	Input 2-wire Pt1000 RTD with automatic compensation
<b>Max. Sensor-to-TransmitterDistance:</b>	30 feet (9.1 meters)
<b>Power:</b>	12-24 VDC, max 600 Ohm load resistance



# Put Together Your S8000 Platform Today

The S8000 series pH and ORP (REDOX) platform is easy to configure. You order only the components that you need. The same electrode can be used for in-line or submersion installations. You can configure the mounting pieces to suit your installation preference as well as interface to different makes and models of instrumentation. This can minimize the number of sensors you require as spares saving time and money. If you need to change the configuration, you re-use most of the components and only purchase what is required.

## Step 1: Electrode Selection - Choose the Electrode required



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S8000CD General use pH

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S8000CD-HF resistant pH

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S8000CD-LCpH for low ionic samples

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S8000CD-ORP ORP Redox

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All electrodes feature the ERP reference system, heavy duty solid gels, Special TNC thread in connector and PPS chemically resistant construction.

## Step 2: Mounting Considerations - Select Mounting Interface



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- a. Retro fit to vintage S653 or S653TC- all you need is an S8000 series electrode and an EA890 adapter interface and attach to your existing S653 or S653TC cap/cable.
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- b. Simple Submersion, interface No ATC or Ground. Add an S8000 series electrode and a S853 or S855 cap/cable.
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- c. In-line or submersion with ATC and Solution Ground. Use the EA899 or EA899TC interface. Specify the TC you want.
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If in-line, also select a Flow Cell FC800C. 1½" slip fit CPVC construction.

## Step 3: Optional Electronics - Choose Electronic Module if required



(none needed for direct electrode input)

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- a. Unity gain pH amplifier battery powered.
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- b. Differential battery powered pH amplifier.
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- c. 4-20mA (Requires DC Power via cable assembly) All TC is done inside the transmitter module and only requires 2 conductor coax cap/cable. Order a PT1 (1000 ohm RTD) as the TC for mounting hardware if TC is desired.
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- d. Custom...customer specified electronics.
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More signal conditioning to come....check our website for updates!

## Step 4: Choose Cap/Cable



(none - if retrofitting to vintage S653 or S653TC cable)

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- a. S853 Cap/Cable with Coax 2 conductor.
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- b. S855 Cap/Cable with Coax plus multi conductor...choose this if you require separate ATC and Solution ground leads directly from sensor. Two standard cable lengths are available, 10 and 25 foot.
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# Specifications

<b>pH Range:</b>	0 - 14pH (0-12.3pH with low Na+ ion error)
<b>Temperature Range:</b>	0-100* Degrees Celsius, de-rated under pressure
	*0-80 Degrees C in Flow Cell or with Electronics
<b>Pressure Range:</b>	0-100 psig (7.5 Bar), de-rated under temperature
<b>Reference Type:</b>	Double Junctions, Sensorex ERP System
<b>ORP Redox Electrode:</b>	-1000mV to +1000mV
<b>HF resistant pH electrode:</b>	0-12pH, 0-50 degrees Celsius

## Ordering Information

### SUBMERSION

Order Electrode + EA part + (Optional EM if required) + Cap/Cable

### IN-LINE

Order Electrode + Appropriate EA899 or EA899TC + (Optional EM if required) + Cap/Cable + Flow Cell

<b>S8000CD</b>	Combination double junction ERP pH electrode
<b>S8000CD-ORP</b>	Combination double junction ERP ORP electrode
<b>S8000CD-HF</b>	Combination double junction ERP pH electrode HF resistant
<b>S8000CD-LC</b>	Combination double junction ERP pH electrode low ionic
<b>S8000CD-ORP-LC</b>	Combination double junction ERP ORP electrode low ionic
<b>EA890</b>	Adapts New 8000 sensors to old S653 or S653TC cable assemblies
<b>EA891</b>	Submersion non TC interface for S8000 Sensors to new S853 and S855 cap cable assemblies
<b>EA899</b>	Electrode Body Holder non TC for in-line or submersion installations
<b>EA899TC</b>	Electrode Body Holder with solution ground and ATC for in-line or submersion installations. Specify ATC element required eg. -PT1, -P1K, etc.
<b>EM800</b>	Battery powered unity gain amplifier
<b>EM801</b>	Battery powered differential amplifier
<b>EM802/pH</b>	2-wire 4-20 mA pH transmitter
<b>EM802/ORP</b>	2-wire 4-20 mA ORP transmitter
<b>S853/10</b>	Cap Cable with coax for EA, EM parts, 10 foot
<b>S853/25</b>	Cap Cable with coax for EA, EM parts, 25 foot
<b>S855/10</b>	Cap Cable with coax + multi-conductors for EA, EM parts, 10 foot
<b>S855/25</b>	Cap Cable with coax + multi-conductors for EA, EM parts, 25 foot
<b>FC800</b>	1.5" Slip Fit CPVC Flow Cell for In-line Installations
<b>FC801</b>	Slip adapter, adapts FC800 Tee to 32mm or 1 inch pipe

**TX100** 2-wire pH/ORP Transmitter with Display, Isolated Output

