

THE NEXT GENERATION

Self Cleaning Flat Surface pH/ORP Electrodes

Resist Coating

Resist Abrasion

Modular Plug and Play

Configurable

Enhanced ERP Reference System

PPS Construction



SENSOREX[®]

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

S8000 Series pH/ORP Electrode Platform

LIQUID ANALYTICAL SOLUTIONS

Modular Flat Surface pH/ORP Electrodes

Configurable for In-line or Submersion Use

Optional plug-in Electronic Interfaces

Enhanced Sensorex ERP Reference System

REDOX, HF and Low Ionic Solution Options



Modular, Flexible, Configurable PPS Construction

Cap/Cable featuring coax
or multi conductor cables

Fully-equipped Mounting adapter
for in-line and submersion with
ATC and solution ground

S8000 Series Replaceable
Electrode Cartridge featuring
Sensorex ERP reference system

Optional Electronics
Interface Modules

Solution Ground/ ATC Pin

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





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:

- Battery powered unity gain module EM800
- Battery powered differential module EM801
- Blind 2 wire 4-20 mA transmitter EN802/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

Measuring Range:	(pH) 0.00 to 14.00pH, 0.01 pH resolution, +/- 0.01 accuracy
Measuring Range:	(ORP/mV) -1999mV to 1999mV, 1mV resolution, +/- 2mV accuracy
Temperature Range:	-20 degC to 110 degC / -4 degF to 230 degF, 0.1 degC/F resolution
Current Output:	Range 2.00mA to 24mA , .01mA Resolution, +/-0.005mA accuracy, 500V input/output isolation
Enclosure:	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)
Weight:	approx. 1lb (.45kg)
Mounting Options:	Wall, Panel, Pipe and Din Rail.
Conduit Openings:	2 each 3/8" opening cordgrips included.
Ambient Temperature:	Transmitter Service, 0 degC to 60degC / 32 degF to 140 degF
Ambient Humidity:	0 to 95%, non-condensing
Location:	Designed for non-hazardous areas
Temperature:	Input 2-wire Pt1000 RTD with automatic compensation
Max. Sensor-to-TransmitterDistance:	30 feet (9.1 meters)
Power:	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



- _____
S8000CD General use pH
- _____
S8000CD-HF resistant pH
- _____
S8000CD-LCpH for low ionic samples
- _____
S8000CD-ORP ORP Redox

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



- _____
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.
- _____
b. Simple Submersion, interface No ATC or Ground. Add an S8000 series electrode and a S853 or S855 cap/cable.
- _____
c. In-line or submersion with ATC and Solution Ground. Use the S899 or S899TC interface. Specify the TC you want.

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)
- _____
a. Unity gain pH amplifier battery powered.
- _____
b. Differential battery powered pH amplifier.
- _____
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.
- _____
d. Custom...customer specified electronics.

More signal conditioning to come....check our website for updates!

Step 4: Choose Cap/Cable



- _____
(none - if retrofitting to vintage S653 or S653TC cable)
- _____
a. S853 Cap/Cable with Coax 2 conductor.
- _____
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.

Specifications

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

S8000CD	Combination double junction ERP pH electrode
S8000CD-ORP	Combination double junction ERP ORP electrode
S8000CD-HF	Combination double junction ERP pH electrode HF resistant
S8000CD-LC	Combination double junction ERP pH electrode low ionic
S8000CD-ORP-LC	Combination double junction ERP ORP electrode low ionic
EA890	Adapts New 8000 sensors to old S653 or S653TC cable assemblies
EA891	Submersion non TC interface for S8000 Sensors to new S853 and S855 cap cable assemblies
EA899	Electrode Body Holder non TC for in-line or submersion installations
EA899TC	Electrode Body Holder with solution ground and ATC for in-line or submersion installations. Specify ATC element required eg. -PT1, -P1K, etc.
EM800	Battery powered unity gain amplifier
EM801	Battery powered differential amplifier
EM802/pH	2-wire 4-20 mA pH transmitter
EM802/ORP	2-wire 4-20 mA ORP transmitter
S853/10	Cap Cable with coax for EA, EM parts, 10 foot
S853/25	Cap Cable with coax for EA, EM parts, 25 foot
S855/10	Cap Cable with coax + multi-conductors for EA, EM parts, 10 foot
S855/25	Cap Cable with coax + multi-conductors for EA, EM parts, 25 foot
FC800	1.5" Slip Fit CPVC Flow Cell for In-line Installations
FC801	Slip adapter, adapts FC800 Tee to 32mm or 1 inch pipe
TX100	2-wire pH/ORP Transmitter with Display, Isolated Output

Form 8000 Platform
10/2008

Laboratory Products



Sensorex manufactures a complete line of laboratory electrodes for pH, ORP, Conductivity and Dissolved Oxygen. Request a copy of our laboratory electrodes catalog or visit our web site at <http://www.sensorex.com>.



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