



Sensorex[®]

Sensors, Knowledge
and Experience
You Can Depend On

Process Analytic Product Guide

Flat Surface pH Electrodes

Flat Surface ORP Electrodes

General Use pH and ORP Electrodes

Toroidal Conductivity Sensors

Stainless Conductivity and Resistivity Sensors

General Use Conductivity Sensors

Dissolved Oxygen Sensors

Chlorine Dioxide Sensors



Sensorex[®]

Industrial Sensing Solutions

Who We Are

With more than 30 years of experience, Sensorex is a recognized leader in high quality electrode manufacturing for industry. We offer pH, ORP (REDOX), Conductivity, Resistivity, Dissolved Oxygen and other specialty electrodes for a wide range of applications. Our sensing solutions are designed to solve problems and enhance measurement performance. For detailed specifications and data-sheets on any of our products, please visit our website at: <http://www.sensorex.com>.



With over 30 years serving industry, Sensorex provides knowledge and experience you can depend on.

Facility and Staff

Our modern 22,500 sq. ft. manufacturing facility allows us to develop and manufacture substantial volumes of sensors with consistent quality. In-house production and engineering laboratories support our manufacturing effort. Our technical staff has decades of practical experience in addition to technical expertise to support users with application assistance.

PRODUCTS

We produce a wide array of sensors and accessories. Our core business is comprised of:

- Flat Surface pH Electrodes
- Flat Surface ORP Electrodes
- General Use pH and ORP Electrodes
- Toroidal Conductivity Sensors
- Stainless Conductivity & Resistivity Sensors
- General Use Conductivity Sensors
- Dissolved Oxygen Sensors
- Chlorine Dioxide Sensors

INDUSTRIES SERVED

- Water Treatment
- Wastewater
- Aquaculture
- Medical
- Electroplating
- Food and Beverages
- Printing
- Agriculture
- Semiconductor
- Refrigeration
- Cooling Towers
- Boilers
- Pulp and Paper
- Pharmaceutical
- Bio Technology

Flat Surface, Self-Cleaning pH and ORP Electrodes

Solve Coating and Abrasion Problems!



- Install electrodes in seconds without tools!
- Available in CPVC or PVDF!
- Universally compatible with most makes and models of transmitters and controllers!
- Easy-to-clean flat-surface pH glass and platinum ORP surface!
- Problems solving models for ground loops, HF resistant pH and more!

Sensorex manufactures problem solving, user friendly pH and ORP electrodes that are self-cleaning in turbulent flow. The quick disconnect cartridge feature is a time saver that has attracted many users to Sensorex over the past 25 years. Designed for nearly all pH and ORP applications, the rugged flat-surface cartridge design is also available in special configurations for applications with low ionic strength, for hydrofluoric acid and ground fault samples. Four convenient mounting styles are available to provide the optimal ease of use.



CPVC or PVDF materials of construction are available for to ensure solvent capability. All mounting hardware is available with or without ATC (automatic temperature compensation).

Submersible pH and ORP Electrodes



These submersible flat pH and ORP electrodes can improve performance in coating and other high maintenance applications. Positioning the electrode near agitation can reduce coating buildup and reduce the need to clean the electrodes. The cartridge type design provides for changing in seconds to minimize production downtime. Compatible with most every make and model pH control system.

Model #	Description
S650CD	pH Electrode
S650CD-ORP	ORP Electrode
S650CDHF	HF resistant pH Electrode
DA650CD	Ground Loop pH Electrode
DA650CD-ORP	Ground Loop ORP Electrode
S653	Cap/Cable Assembly
S653W	Cap/Cable Assembly with HD Water Proof Cable
S653TC	Cap Cable with ATC Elements

In-line Mounted pH and ORP Electrodes



Our in-line flat surface pH and ORP electrodes will enhance operation in coating and other high maintenance applications. Turbulent flow across the flat measuring surface can lengthen time between required service intervals. The electrodes can be removed from service with no tools and replaced in seconds if required. Three sizes are available depending on your pipe size requirements. Choose 3/4", 1" or 2" models.

Line Size	Model #
3/4" Lines	Electrodes- S660CD, S660CDHF, S660CD-ORP, DA660CD
	FC66C Mounting Gland,
	S653 Cap/Cable Assembly,
	FC66TC Gland and Cap/Cable with ATC
1" Lines	Electrodes- S661CD, S661CDHF, S661CD-ORP, DA661CD
	FC67C Mounting Gland
	S653 Cap/Cable Assembly
	FC67TC Gland and Cap/Cable with ATC
2" Lines	Electrodes- S662CD, S662CDHF, S662CD-ORP, DA660CD
	FC68C Mounting Gland
	S653 Cap/Cable Assembly
	FC68TC Gland and Cap/Cable with ATC

Flat Surface, Self-Cleaning pH and ORP Electrodes

By-Pass/Side Stream Mounted pH and ORP Electrodes



This side stream flat pH and ORP electrode is designed for oily water applications. The special flow cell increases the velocity at the face of the flat electrode. This cleaning action can reduce the service intervals for electrodes in these high maintenance applications.

Model #	Description
S645CD	pH Electrode
S645CD-ORP	ORP Electrode
S645CDHF	HF Resistant pH Electrode
FC60C	Special Restrictor Flow Cell
FC60TC	Special Restrictor Flow Cell with ATC
S648	Cap/Cable Assembly

Insertion Mounted pH and ORP Electrodes



Our insertion flat surface pH and ORP electrodes feature our quick disconnect designed cartridge and can be mounted in any direction, even upside down! Different length wet tap (insertion) assemblies are used to insert the electrode into the stream on large pipes or through tank side-walls. Insertion depths are adjustable from zero up to the maximum stated length.

Model #	Description
S655CD	pH Electrode
S655CD-ORP	ORP Electrode
S675 (12" depth)	Insertion Assembly
S675TC	Insertion Assembly with ATC and Cable
S676 (18" depth)	Insertion Assembly
S676TC	Insertion Assembly with ATC and Cable
S677 (24" depth)	Insertion Assembly
S677TC	Insertion Assembly with ATC and Cable
S653	Cap/Cable Assembly

Insertion Assembly Ball Valve



The Model BV1 is a full port 1" ball valve for use with our insertion assemblies. Provides for installations into large pipes or tank side walls.

Model #	Description
BV1	Full port 1" Ball Valve

General Use Series pH and ORP Electrodes

Economic Quality!



- Money Saving - Affordable Designs
- Compatible with Most Meters
- Options for Difficult Applications

Threaded PVC In-line and Submersion Styles



The S260 Series provide an economical, multi-purpose solution for in-line or submersion applications. Based upon our proven S220C and S520C-ORP technology, these durable sensors are housed in a PVC body with 1/2" or 3/4" NPT threads. Single and double junctions are available with bulb or flat glass pH surface. Best of all, the sealed gel filled design requires no maintenance.

Model #	Description
S260C	1/2" NPT pH Electrode
S260C-ORP	1/2" NPT ORP Electrode
S262CD	1/2" NPT Flat Double Junction pH Electrode
S261C	3/4" NPT pH Electrode
S261C-ORP	3/4" NPT ORP Electrode
S263CD	3/4" NPT Flat Double Junction pH Electrode

Threaded Pipe Nipples



The S220 Series offers high performance at temperatures up to 65°C and 100 psig. PVC, CPVC and Stainless Steel bodies are available with 1/2" or 3/4" NPT threads for in-line or submersion applications. Cable lengths and end connections are provided for your specific installation. Single and double junctions are available. The sealed gel-filled design requires no maintenance.

Model #	Description
S220C	3/4" NPT pH Electrode
S220CD	3/4" NPT Double Junction pH Electrode
S520C-ORP	3/4" NPT ORP Electrode
S520CD-ORP	3/4" NPT Double Junction ORP Electrode

Cartridge Style



Low cost cartridge - type electrodes incorporate the same quick disconnect cable assembly used in our popular industrial 600 series electrodes. Single and double junction designs use a sealed, gel filled design. Select either pH or ORP. Use with our gland fitting for in-line measurement.

Model #	Description
S222C	pH Electrode
S222C-ORP	ORP Electrode
S222CD	Double Junction pH Electrode
S222CD-ORP	Double Junction ORP Electrode
FC50P	1/2" MNPT Mounting Gland
FC75P	3/4" MNPT Mounting Gland

Gland Mounting Styles



Versatile polypropylene gland fittings are available to mount our 12mm series pH, ORP, Conductivity or DO electrodes into standard pipe "T" fittings. The glands are reusable, and handle temperatures of 100°C at 100 psig. Select either 1/2" or 3/4" NPT male threads. Stainless steel gripper rings permit the electrode to be positioned anywhere along its body. Glands can be reversed for submersion use.

Model #	Description
FC50P	1/2" MNPT Mounting Gland
FC75P	3/4" MNPT Mounting Gland

Toroidal and Contacting Conductivity Sensors

Toroidal (Inductive) Conductivity Cells



Also known as inductive or non-contacting, the Sensorex toroidal conductivity cell provides a large measuring range of 0 -2000 mS (0 -2,000,000 uS) with a single sensor. These sensors require virtually no-maintenance, as there are no measuring elements in direct solution contact, which can be coated or fouled. Constructed of Polypro as well as optional PVDF or PEEK, these inductive cells can be used with many makes of toroidal controllers. Ready for direct submersion mounting or installed in a 2" pipe with use of a pipe adapter.



Model #	Description
TCS-1000	Polypro Toroidal Sensor
A1000	2" pipe adapters

Contacting Stainless Steel Cells



Sensorex manufactures a quality line of industrial grade stainless steel conductivity and resistivity sensors. Designed for demanding boiler applications or for high purity water and everything in between. Special versions with 1-1/2" and 2" tri-clover sanitary fittings are also available with or without ATC (automatic temperature compensation). Cell constants of 0.1, 1.0 and 10 are offered as standards. Special cell constants and configurations are available per request on a volume basis. Teflon or PEEK insulators are used depending on temperature/pressure requirements.

- **High Temperature Models Available**

Model #	Description
CS650	1/2" NPT Threads
CS675	3/4" NPT Threads
CS676	3/4" NPT Threads (Extra long 3" insertion depth)
CS615	1" or 1.5" Tri-Clover
CS620	2" Tri-Clover

General Use Conductivity Sensors



Our CS150 and CS200 12mm epoxy body conductivity/resistivity sensors feature graphite or platinum measuring surfaces. Available cell constants are 0.1, 1.0 and 10. Mounting in-line can be accomplished with use of our FC50P (1/2") or FC75P (3/4") mounting glands. The glands may be reversed and attached to a pipe for submersion mounting.

Model #	Description
CS150	Graphite, 12mm Epoxy Body
CS150TC	Graphite, 12mm Epoxy Body with ATC
CS200	Platinum, 12mm Epoxy Body
CS200TC	Platinum, 12mm Epoxy Body with ATC
FC50P	1/2" NPT Mounting Gland
FC75P	3/4" NPT Mounting Gland

DO Sensors, DO Accessories, Chlorine Dioxide Sensors

DO Sensors



The DO6000, DO7000, DO7420 and DO6420 series dissolved oxygen sensors feature a large capacity electrolyte reservoir, positive fit, easy to replace membrane and dependable galvanic cell technology for long term deployment. Ideal for aquaculture and wastewater monitoring applications these sensors require minimal maintenance.

Model Numbers

DO6000H, DO6000T, DO6000H-TC, DO6000T-TC, DO6420

DO7000H, DO7000T, DO7000H-TC, DO7000T-TC, DO7420

DO Accessories



DO sensor accessories including replacement membranes, installation tool and electrolyte are sold separately or as a convenient kit. Also offered is WPR12 membrane cleaner for removal of biomaterial from applications such as catfish ponds or aeration tanks in water treatment facilities. The WPR12 can be operated by using the optional timer PC1 and 12V power supply DC12.

Model Numbers

DO6001, DO60002, DOKit-HDPE, DOKIT6000T, DOKIT7000T, DO6005-H, DO6005-T, DO7002

WPR12 DO Wiper Assembly, PC1, DC12

Chlorine Dioxide Sensors



The CLD series chlorine dioxide sensors feature amperometric measurement technology. Designed for use in water treatment disinfection applications and for use with chlorine dioxide generators, these sensors are available in two ranges 0-2 and 0-10 ppm of chlorine dioxide. Output is 4-20mA.

Model # Description

CLD02	0-2 ppm CLO2
CLD10	0-10 ppm CLO2
FC70	Flow Cell For Amperometric Sensor

Accessories

pH, ORP and Conductivity 4-20mA Interface



Sensorex provides a line of blind signal conditioning transmitters to provide 4-20mA sensor outputs for PLC and other general 4-20mA input devices.

Model Numbers Description

PHMA	pH Transmitter
ORPMA	ORP Transmitter

pH and ORP Checkers



Model # Description

C-110	pH/ORP Simulator
CX2	Inter-connect Cables for C110

pH Preamplifiers



Sensorex provides a wide range of preamplifiers for original equipment. The preamplifiers are powered by the pH instrument or self powered and are supplied with simple installation instructions.

Model Numbers

V1, V2, U698-03, SSA, LIA, GL90A, GL90B
V1-LN, UVA, U2587, ECI, PHMA, GF9030, PHAMP-1

Buffers and Calibration Standards

pH Buffer Standards



Sensorex provides pH buffers for calibrating pH electrodes. Each buffer is available in pint or gallon bottles. All buffers are traceable to NIST standards, and optional NIST certificates are available.

Model #	Buffer	Size
B104	pH 4.01	1 pint
B107	pH 7.0	1 pint
B110	pH 10.0	1 pint
B804	pH 4.01	1 gallon
B807	pH 7.0	1 gallon
B810	pH 10.0	1 gallon

ORP Calibration Standards



Sensorex provides ORP calibration standards to check performance and aging of ORP electrodes. Simply make a solution of pH 4 or 7 buffer and add quinhydrone to get a stable mV solution. The B125 kit includes 1 pint each of pH 4.01 and pH 7 buffer and 2 plastic cups, 20 grams quinhydrone and measuring sticks. Also pre-mixed Zobel and Lights solution are available.

Model #	Description
B125	ORP Kit
B225	Zobel Solution
B425	Lights Solution

Conductivity Standards



Conductivity standards to mimic natural waters are available in quart containers. A wide range of standards from 23.8 uS to 30mS are available. NIST traceability certificates are also available upon request.

Model #	Description
TDS15	23.8uS/15ppm
TDS30	46.7uS/30ppm
TDS150	229uS/150ppm
TDS300	445uS/300ppm
TDS500	731uS/500ppm
TDS1000	1,417uS/1,000ppm
TDS1500	2,060uS/1,500ppm
TDS3000	3,900uS/3,000ppm
TDS5687	7,000uS/5,687ppm
TDS9523	16,630uS/9,523ppm
TDS15000	30,100uS/16,630ppm
TDS30000	30,100uS/30,000ppm

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>.

Self Cleaning Flat Surface pH and ORP Electrodes



Toroidal Conductivity Sensors



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