S8000 Series Modular pH & ORP Systems

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 Celsius, when mounted in flow cell or 70 Degrees Celsius with submerged electronic module.

Pressure Range: 0-100 psig (7.5 Bar), de-rated under temperature

Reference Type: Double Junctions, Sensorex ERP System

Optional Models: ORP Redox Electrode: -1000mV to +1000mV

HF resistant pH electrode: 0-12pH, 0-50 degrees Celsius

Low Ionic models: for solutions of <100uS/cm conductivity

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. This provides a complex path which protects the reference in the presence of interacting ions such as heavy metals, 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.

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

The first three modules 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 stocked in two standard lengths, 10 feet and 25 feet. Both cap cable utilize an 8 pin connector. Special cable lengths are also available.
BUILD YOUR S8000 MODULAR pH/ORP SYSTEM

CABLE ASSEMBLY
- S853 or S855 Cap Cable

ELECTRODE ADAPTER
- EA890
- EA891
- EA899 or EA899TC

ELECTRONIC MODULE
- EM800, EM801, EM802

FLOW CELL (inline only)
- FC800 - 1.5" Slip
- FC875/T - 3/4" NPT
- FC875/S - 3/4" Slip

ELECTRODE
- S8000CD
- S8000CDHF
- S8000CD-LC
- S8000CD-ORP
BUILD YOUR S8000 MODULAR pH/ORP SYSTEM-
USE YOUR OWN TEE

CABLE ASSEMBLY
S853 or S855 Cap Cable

ELECTRONIC MODULE
EM800, EM801, EM802

ELECTRODE
S8075CD
S8075CDHF
S8075CD-LC
S8075CD-ORP

3/4" SCH 80 TEE
Customer Supplied
## ELECTRODE - pH or ORP

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S8000CD</td>
<td>Flat surface pH electrode cartridge S8000 Series, Ryton body, double junction reference</td>
</tr>
<tr>
<td>S8000CD-ORP</td>
<td>Flat surface ORP electrode cartridge S8000 Series, Ryton body, double junction reference</td>
</tr>
<tr>
<td>S8000CDHF</td>
<td>Flat surface pH electrode cartridge S8000 Series, HF resistant, Ryton body, double junction reference</td>
</tr>
<tr>
<td>S8000CD-LC</td>
<td>Flat surface pH electrode cartridge S8000 Series, for low conductivity water (&lt;100uS), Ryton body, double junction reference</td>
</tr>
<tr>
<td>S8075CD</td>
<td>Flat surface pH electrode cartridge S8000 Series, Ryton body, double junction reference, integrated 3/4&quot; NPT threads</td>
</tr>
<tr>
<td>S8075CD-ORP</td>
<td>Flat surface ORP electrode cartridge S8000 Series, Ryton body, double junction reference, integrated 3/4&quot; NPT threads</td>
</tr>
<tr>
<td>S8075CDHF</td>
<td>Flat surface pH electrode cartridge S8000 Series, HF resistant, Ryton body, double junction reference, integrated 3/4&quot; NPT threads</td>
</tr>
<tr>
<td>S8075CD-LC</td>
<td>Flat surface pH electrode cartridge S8000 Series, for low conductivity water (&lt;100uS), Ryton body, double junction reference, integrated 3/4&quot; NPT threads</td>
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## ELECTRODE ADAPTER

<table>
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<tr>
<th>Part Number</th>
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<tbody>
<tr>
<td>EA890</td>
<td>Electrode adapter, retrofits S8000 to old S653 cables</td>
</tr>
<tr>
<td>EA891</td>
<td>Electrode adapter, Submersion mount, NO TC. Use with cable S853</td>
</tr>
<tr>
<td>EA899</td>
<td>Electrode adapter, Submersion or in-line mount, NO TC, with solution ground. Use with cable S855</td>
</tr>
<tr>
<td>EA899TC</td>
<td>Electrode adapter, Submersion or in-line mount, with TC &amp; solution ground. Use with cable S853. Specify TC</td>
</tr>
</tbody>
</table>

## ELECTRONIC MODULES

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>EM800</td>
<td>Battery-powered, unity gain amplifier. Use for cable length &gt;30ft only. Use with S853 cable.</td>
</tr>
<tr>
<td>EM801</td>
<td>Battery-powered, differential amplifier. Requires Electrode adapter EA899 or EA899 TC. Use with S853 cable.</td>
</tr>
<tr>
<td>EM802-pH</td>
<td>24V DC-powered, 4-20mA pH transmitter module. Requires Electrode adapter EA899 TC/P1k. Use with S853 cable.</td>
</tr>
<tr>
<td>EM802-ORP</td>
<td>24V DC-powered, 4-20mA ORP transmitter module. Requires Electrode adapter EA899 or EA891. Use with S853 cable</td>
</tr>
</tbody>
</table>

## CABLE ASSEMBLIES

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>S853/10/&quot;X&quot;</td>
<td>Coaxiable cable assembly for S8000 Series, 10ft cable length. Specify connector in place of &quot;X&quot;</td>
</tr>
<tr>
<td>S853/25/&quot;X&quot;</td>
<td>Coaxiable cable assembly for S8000 Series, 25ft cable length. Specify connector in place of &quot;X&quot;</td>
</tr>
<tr>
<td>S855/10/&quot;X&quot;/&quot;Y&quot;</td>
<td>Coaxiable cable assembly + 3 wire (R, G, B) S8000 Series, 10ft cable length. Specify pH connector in place of &quot;X&quot;, TC connector in place of &quot;Y&quot;</td>
</tr>
<tr>
<td>S855/25/&quot;X&quot;/&quot;Y&quot;</td>
<td>Coaxiable cable assembly + 3 wire (R, G, B) S8000 Series, 25ft cable length. Specify pH connector in place of &quot;X&quot;, TC connector in place of &quot;Y&quot;</td>
</tr>
</tbody>
</table>

10ft and 25ft cables are in stock. Other cable lengths can be made. Consult Sensorex for details.

Cable Connector Choices: BNC, Tinned lead ("-TL"), Spade Lug ("SL")
### ORDERING INFORMATION (Cont.)

#### FLOW CELLS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>FC800</td>
<td>Flow cell, CPVC for S8000 Series. Fits EA899 or EA899TC electrode adapters, 1.5&quot; Slip connection.</td>
</tr>
<tr>
<td>FC805</td>
<td>Flow cell, CPVC for S8000 Series. Fits EA899 or EA899TC electrode adapters, 1.0&quot; FNPT connection.</td>
</tr>
<tr>
<td>FC95C</td>
<td>Flow cell, CPVC for S8000 Series. Fits EA899 or EA899TC electrode adapters, 2.0&quot; Slip connection.</td>
</tr>
<tr>
<td>FC806</td>
<td>Flow cell, CPVC for S8000 Series. Fits EA899 or EA899TC electrode adapters, 1.0&quot; SLIP connection.</td>
</tr>
<tr>
<td>FC875/T</td>
<td>Flow cell, CPVC for S8000 Series. Fits EA899 or EA899TC electrode adapters, 3/4&quot; MNPT connection.</td>
</tr>
<tr>
<td>FC875/S</td>
<td>Flow cell, CPVC for S8000 Series. Fits EA899 or EA899TC electrode adapters, 3/4&quot; slip/socket connection.</td>
</tr>
</tbody>
</table>

#### PRE-CONFIGURED KITS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>S8100/10/BNC</td>
<td>Kit, S8000CD + EA891 + S853/10/BNC (Submersion mount pH, no ATC), 10ft cable, BNC connector</td>
</tr>
<tr>
<td>S8100-ORP/10/BNC</td>
<td>Kit, S8000CD-ORP + EA891 + S853/10/BNC (Submersion mount ORP), 10ft cable, BNC connector</td>
</tr>
<tr>
<td>S8100TC/10/BNC/TL</td>
<td>Kit, S8000CD + EA899TC/P1K + S855/10/BNC/TL (Submersion mount pH with ATC, 10ft cable, BNC connector, PT1000 TC type)</td>
</tr>
<tr>
<td>S8200/10/BNC</td>
<td>Kit, S8000CD + EA899 + FC800 + S853/10/BNC (In line pH, no ATC, 1.5&quot; Flow cell, 10ft cable, BNC connector)</td>
</tr>
<tr>
<td>S8200-ORP/10/BNC</td>
<td>Kit, S8000CD-ORP + EA899 + FC800 + S853/10/BNC (In line ORP, 1.5&quot; Flow cell, 10ft cable, BNC connector)</td>
</tr>
<tr>
<td>S8200TC/10/BNC/TL</td>
<td>Kit, S8000CD + EA899TC/P1K + S855/10/BNC/TL (In line mount pH with ATC, 1.5&quot; Flow cell, 10ft cable, BNC connector, PT1000 TC type)</td>
</tr>
</tbody>
</table>
Outline and Dimensions

S8000CD, S8000CDHF, S8000CD-ORP, S8000CD-LC

S8075CD, S8075CD-ORP

S8000CD + EA890 + S653  S8000CD + EA891 + S853
Outline and Dimensions

**S8000CD + EA899TC + S855**

- 3/4" NPT
- Ø0.99" (25.1 mm)
- 9.46" (240.3 mm)
- 2.11" (53.6 mm)
- Ø2.04" (51.8 mm)

**S8000CD + EA899TC + EM800 Series + S855**

- 3/4" NPT
- Ø0.99" (25.1 mm)
- 9.46" (240.3 mm)
- 2.11" (53.6 mm)
- Ø2.04" (51.8 mm)
- 12.69" (322.3 mm)
- 1.45" (36.8 mm)
- EM800 or EM801 or EM802-pH EM802-ORP
- Ground Pin (SS316L)
Outline and Dimensions

S8000CD + EA899TC
+ S855 + FC800

S8000CD + EA899TC
+ S855 + FC804 + EM800

Outline and Dimensions

3/4" NPT

S8000CD + EA899TC
+ S855 + FC800

S8000CD + EA899TC
+ S855 + FC804 + EM800

3/4" NPT

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Outline and Dimensions

S8000CD + EA899TC + S855 + FC800 + FC801

S8000CD + EA899TC + S855 + FC875/T or FC875/S

FC801 x 2
(1” slip on one side of each fitting 32mm slip on other side) *

3/4” NPT

10.05” (255 mm)

3.34” (85 mm)

3.82” (97 mm)

5.18” (131.6 mm)

7.63” (193.8 mm)