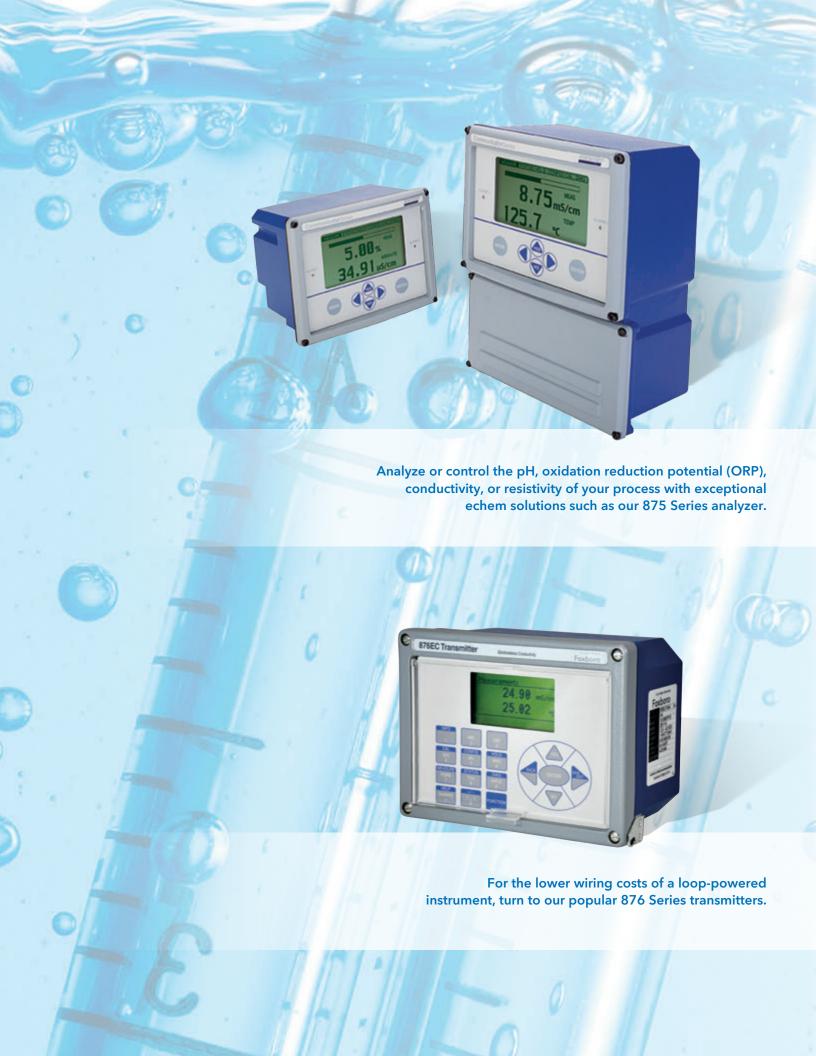


Electrochemical Measurement & Instruments





Electrochemical Measurements

The Echem Experts

Bring us your toughest electrochemical measurement challenges. We have the intelligent Foxboro analyzers, transmitters, sensors and solutions you need.

Our 50-year analytical history displays an entire galaxy of significant technical firsts. Any survey would include our multi-measurement intelligent transmitters, flow-through conductivity sensors, dissolved oxygen sensor diagnostics and more. Our unique, long-lived DolpHin sensors are currently revolutionizing pH measurement. One of our recent sensor releases, the unique FT10, is an all-PFA flowthrough electrodeless conductivity sensor designed for the most aggressive and high-purity applications in semiconductors, specialty chemicals and other industries.

Today, we supply more than just quality instrumentation. Our expert application specialists tackle challenges from feasibility studies for new processes to fine-tuning your existing application.

The Ultimate Analyzer Solution

Our 875 Series intelligent electrochemical analyzer is the perfect platform for all your analysis needs.

Call on it for accurate, flexible measurement of variables from contacting conductivity and resistivity to pH/ORP and electrodeless conductivity.

No analyzer on today's market is easier to use. All 875 Series models are packed with useful features, from history logs with up to 100 time- and date-stamped events to complete sensor and analyzer diagnostics.

The 875PH analyzer provides auto-buffer recognition for flawless pH calibrations, and sensor diagnostics for broken glass, coated reference and electrode aging. The 875EC model offers application switching and storage of up to three sets of application configurations that include custom curve sets.

Every 875 model has all the advantages you require in an analyzer. It furnishes ultimate speed and simplicity in installation, configuration, calibration and operation. You get a large, backlit LCD; on-screen help with intuitive menus; field or panel-mounting; and easy wiring access. Plus a host of additional features tailored to your industry or application.

This analyzer is line-powered and certified for Class I, Division 2 environments.

Intelligent Transmitters

The Foxboro 876 series intelligent two-wire transmitter shares many of the 875's advantages. It has become an industry standard offering the same balance of built-in capabilities, such as advanced sensor diagnostics, with ease of use, including self-prompting menu trees and PC-based configuration.

The 876 is loop-powered, yielding lower wiring costs. This transmitter is also intrinsically safe and certified for Class I, Division 1 areas.

The Sensors You Seek

We offer the widest array of innovative sensor technologies, materials, sizes and geometries in the business. From ultrapure water to the most aggressive acids and bases, we can handle your process solution. Among our offerings: Foxboro electrodeless conductivity, pH/ORP/ISE, flow-through conductivity, contacting conductivity/resistivity and dissolved oxygen sensors. Rely on Foxboro sensors to solve your most challenging applications. Our breadth of line drastically simplifies your requirements for installation, calibration, accessibility, troubleshooting and maintenance.

The Right Fit for Every Application

Foxboro sensors provide the specific advantages for each required application:

- For pure and ultrapure water measurement, our 871CR sensors, with cell factors of 0.1 cm-1 or 10 cm-1, supply the highest possible accuracy.
- For aggressive chemicals or industries requiring unbroken process lines, our flow-through 871FT sensors offer an innovative, noninvasive conductivity solution.
- For conductivity and concentration measurements, our 871EC sensors come with the widest range of materials, sizes and mounting accessories.
- For conductivity measurement of the most aggressive and/or high-purity chemicals in a completely noninvasive, nonmetallic (all-PFA) flowthrough design, choose our new FT10 sensor.
- For measurement of dissolved oxygen, with regular maintenance our tough, rebuildable 871DO sensors can last several years, even in the most challenging applications.

Simplify the calibration of any Foxboro electrodeless conductivity sensor loop by using our high-precision EP485 resistance calibration plugs. Precision calibration... in a shirt-pocket tool!

The pH Benchmark

Our DolpHin sensor line has revolutionized the field. With remarkable longevity in the harshest environments, plus outstanding ease of use in any application, DolpHin has become the industry standard for pH/ORP sensors. DolpHin technology is also available in our 871PH rebuildable sensors.

Twice the Life

DolpHin sensors remain extremely accurate for double the service life of competitive sensors in high temperature and temperature cycling applications up to 121° C (250° F). They maintain remarkably fast temperature response – up to twice as fast as conventional sensors – under the same challenging conditions and they operate in pressures up to 100 psi.

This unheard-of stability in the harshest process environments is due in part to our DolpHin sensors' unique pH glass formulation. A flat glass design offers self-cleaning for longer service life. A domed glass version operates longer and more accurately at high temperatures.

Continual Innovation

Our latest release is a family of high-performance, disposable pH sensors in the widely used 12 mm form factor. The new Foxboro PH12 Series includes the process industry's first PEEK bodied sensor; making it the most durable 12 mm pH sensor available anywhere. It is available with a flat membrane sensing electrode and no metallic wetted parts. Its nonmetallic solution ground is a standard feature, allowing for sensor diagnostics in a cost effective platform.

Foxboro pH and ORP Electrochemical Sensors



Model	PH10 DolpHin	ORP10 DolpHin	PH12	871A	871PH	EP462A
Sensor Type	рН	ORP	pH/ORP	pH/ORP	pH/ORP	pH low conductivity
pH range	0 - 14	N/A	0 - 14	2 - 12	0 - 14	0 - 14
Maximum Temperature	121 C	121 C	140 C	85 C	121 C	100 C
Installation Type	Universal slip fit, Submersion, In-line, Retractable	Universal slip fit, Submersion, In-line, Retractable	PG13 Connection to Accessories, In-line, Retractable	Submersion, In-line, Retractable	Submersion, In-line, Retractable	Twist-lock, Submersion, In-line, Retractable
Electrode Type	Domed or flat	Flat	Domed or Flat	Flat	Selectable	Domed
Maintenance Type	Disposable	Disposable	Disposable	Disposable	Rebuildable	Disposable
Integral Preamp	Yes	Yes	No	Yes	Yes	No
Features	High performance	High performance	12 mm form factor for use with commonly used fittings	Totally flat sensing surface	Small, Inexpensive plug-in electrodes	Stable measurements in high purity water



The sensors in our extraordinary DolpHin family are designed to reduce probe replacements, cut maintenance calls – and improve your ROI.

For pH applications requiring a rugged, yet cost effective sensor in a 12 mm form factor, the Foxboro PH12 provides the most durable materials and construction available.



Foxboro Electrodeless and Flowthrough Conductivity Electrochemical Sensors



Model	871EC	EP307B	EP307G	871FT	EP402	FT10
Sensor Type	Small and large bore	Barrel geometry	Borosilicate glass	Flowthrough	Flowthrough	Flowthrough
Installation Type	Invasive, Insertion, Immersion, Retractable	Invasive, Insertion, Immersion, Retractable	Invasive, In-line, Submersion	Non-invasive, In-line, Sanitary triclamp, Industrial flange	Non-invasive, In-line, Threaded	Non-invasive, In-line, Flaretek tube, NSP300 tube
Line Size	3" min.	3" min.	3" min.	0.5 to 4"	3/32 to 5/8"	1/2, 3/4 and 1"
Calibrate In-line	No	No	No	Yes	Yes	Yes
All Thermoplastic	Yes	Yes	Yes	No	No	Yes



Foxboro's 871FT conductivity sensors are a comprehensive family of flow-through, noninvasive electrodeless assemblies that measure the conductivity of almost any conductive liquid. Featuring a built-in calibration port, the 871FT sensors can be calibrated in-line to improve applications with aggressive chemicals and those in industries such as pharmaceuticals where the process line cannot be broken.

Foxboro's unique F10 all-virgin PFA flowthrough electrodeless conductivity sensor for specialty chemical, high-purity and semiconductor applications.



Foxboro Contacting Conductivity and Resistivity Electrochemical Sensors





Model	871CR	871CC		
Mounting	Insertion, Immersion, Retractable	Insertion, Immersion, Retractable		
Installation Type	Universal slip fit	Fixed installation type dictated by model code selection		
Temperature Compensation	1000 ohm 3-wire platinum RTD	100 ohm 2-wire platinum RTD or 100 kohm 2-wire thermistor		
Accuracy	0.1% of 0.1 cm-1 cell factor	2% of 0.1 cm-1 cell factor		
Insertion Lengths	Model code selectable	Fixed length		



Foxboro electrochemical sensors provide unmatched ease of use, robustness and application flexibility in almost any process solution.



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