

Foxboro Field Devices

Worry Less. Measure More.



Foxboro[®]

by **Schneider** Electric



▶ THE IMPACT OF CONTROL

A single innovative instrument can improve the performance of the production assets in one part of your processing plant or field. A whole group of innovative instruments can positively impact your entire enterprise.

Foxboro instrumentation innovations are allied with industry-leading brands for systems, software, and services. Together, our offerings greatly improve your operation's economic, safety, and environmental performance, while balancing the availability and utilization of all your assets: people, equipment, energy, and inventory.

Since our inception in 1908, our technological innovations have ranged from the first d/p Cell®, to pioneering multivariable instruments, to creating the world's first enterprise control system, InFusion™.

Multiple measurements from these multivariable instruments now aid your quest for increased asset utilization. Our pressure transmitters increase your asset value with best-in-class accuracy levels, backed by the longest standard and optional warranties in the industry. Our mass flow designs are changing the face of Coriolis meters. Our sensors are revolutionizing pH measurement, with improved diagnostics that make them extremely valuable assets. Our positioners offer all the interoperability benefits and asset management advantages of the latest field device technology (FDT).

Foxboro lines are accurate, reliable instruments that measure or analyze temperature, pressure, flow, and electrochemical variables, giving you more integration, interoperability, and innovation from one source. All at a competitive price with low cost of ownership, plus 24-hour support throughout the world.



➤ PRESSURE MEASUREMENTS

The Foxboro Pressure Transmitter Family: The Perfect Fit for Your Application

Foxboro pressure transmitters combine field-proven, reliable silicon strain-gauge sensor technology with our famous simplified and durable packaging.

This family covers a broad range of pressure and level uses, including differential, gauge, and absolute pressure, as well as remote seal and flanged level. A wide variety of materials, flange sizes, and other options will suit every application.

Each transmitter uses the same innovative topworks packaging with modular intelligent electronics — greatly simplifying your installation, operation, maintenance and spare parts requirements.

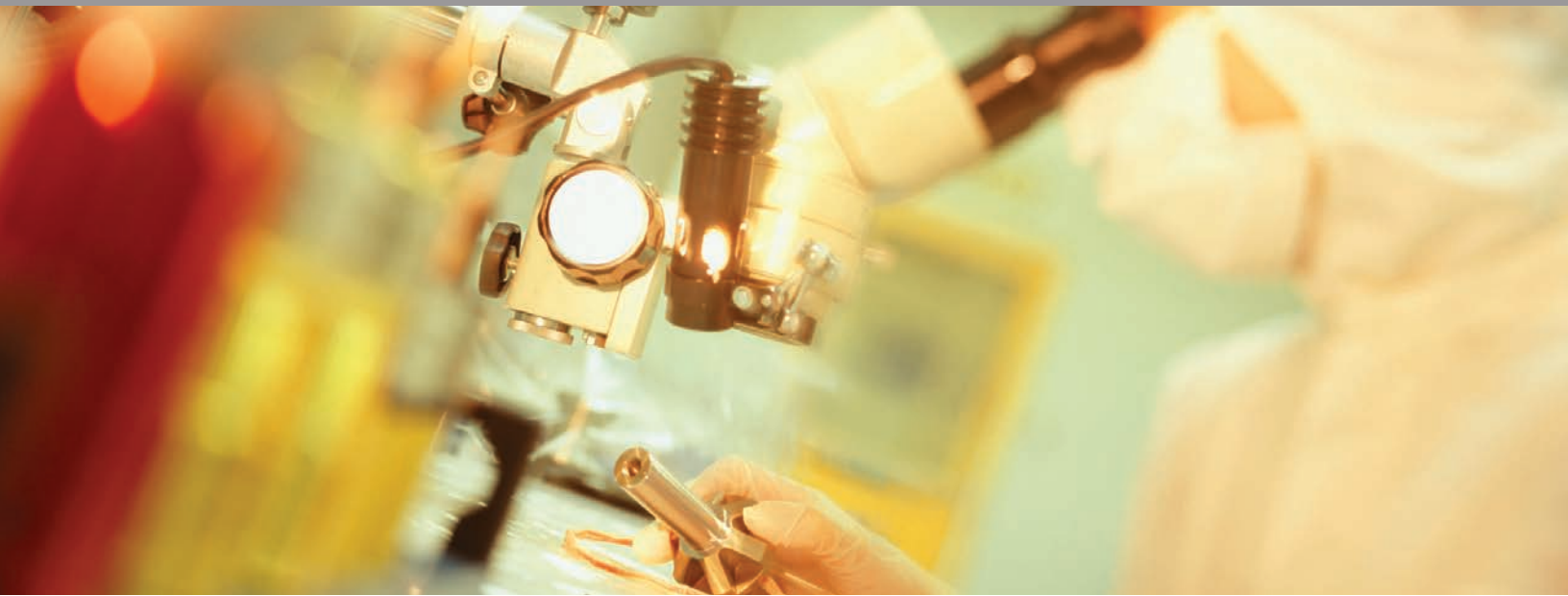
The premium Foxboro line includes pressure transmitters with the highest accuracy and longest warranties in the business.

**SIL2 Certified
Safety Rating**



FOXBORO PRESSURE TRANSMITTER FAMILY:

**Gauge, absolute, differential
pressure, flange level
and remote seals – from
basic requirements to the
most comprehensive and
challenging applications in
your plant.**



The interchangeability and intelligence of our IGP10 pressure transmitter comes through when the pressure is on. A choice of traditional or low profile structures allows you to select the best installation method for each application, while maintaining common configuration, operation, and maintenance procedures.



7 SELECT YOUR MODULE

Pick the level of transmitter intelligence you need: analog outputs of 4 to 20 mA or 1 to 5 V dc (low power) or digital communications using HART, FoxCom, FOUNDATION fieldbus, or PROFIBUS protocol. Modbus communication is also supported on the IMV25 multivariable transmitter.

7 INSTALLATION VERSATILITY

Choose from traditional or new low-profile structures to get the best installation method for your application. The traditional structure retains the industry standard "right-angle" design with process connections in the horizontal plane.

Low-profile structures provide process connections in the vertical plane, facing downward when the transmitter is in the upright position. They are ideal for replacing Coplanar™ transmitters or for meeting Coplanar-type installation requirements that use a similar mounting arrangement.

LP1 low-profile structures make economical, small, lightweight transmitters that are ideal for direct manifold mounting. A single vent/drain screw is provided on each side, positioned to allow both vertical and horizontal mounting.

LP2 low-profile structures are full-featured designs suitable for either direct manifold or bracket mounting. Threaded holes are provided for mounting to existing or new brackets. Separate vent and drain screws on both sides offer complete venting and draining in the upright position.

Setting the Standard

Models IDP10, IGP10/20, and IAP10/20 provide superior functionality, performance, and durability, as well as a broad selection of materials, connections and ranges. They offer high performance with accuracy of $\pm 0.060\%$ of span at turndowns up to 10:1 for popular models.

Two Transmitters in One

With our multi-range transmitter Models IDP25 and IGP25, each sensor covers ranges that normally require two separate transmitters. Span turndown adjustment capability is 400:1 for DP and GP. Only two ranges are required to cover wide spans: 0.12–250 kPa (0.5–1000 in H₂O) for DP and 7–14000 kPa (1–2000 psi) for GP.

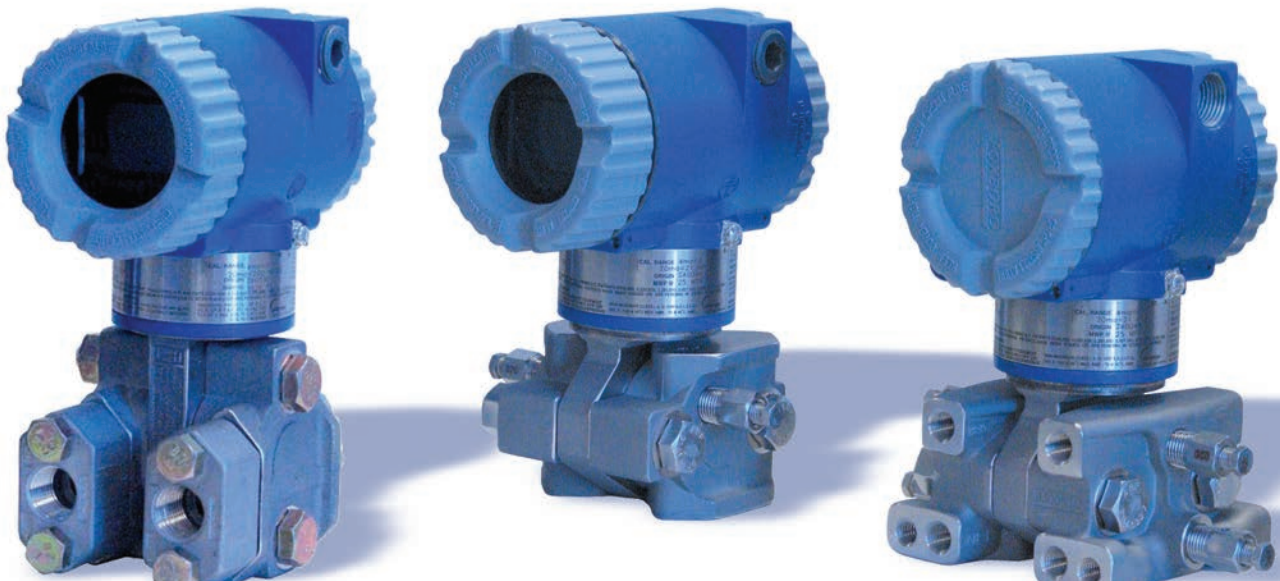
Additional numbers are equally good. Accuracy of $\pm 0.050\%$ of span is maintained over an extremely wide 80:1 span turndown, while stability stays at $\pm 0.02\%$ upper range limit (URL) per year for five years.

This greatly simplifies your planning, ordering, spares procurement and stocking.

Your Premium Choice

Need the best possible performance for both DP and GP applications? Turn to our IDP50 and IGP50 premium-performance transmitter models. These models are ideal for challenges such as differential head measurement for wide-ranging flows, or applications demanding low ambient temperature effect, small spans or high stability.

Again, you will receive wide measurement spans using only two sensors, each having 80:1 turndown capability: 0.63–250 kPa (2.5–1000 in H₂O) for DP and 17–14000 kPa (2.5–2000 psi) for GP. Accuracy leads the industry at $\pm 0.025\%$ of span for turndowns up to 10:1 and within $\pm 0.05\%$ even at turndowns as high as 80:1; stability is better than $\pm 0.02\%$ URL per year for five years, with extremely low total probable error (TPE).





Our IMV30 multivariable transmitter measures absolute pressure, differential pressure, and process and transmitter temperatures, as well as calculating mass flow rate.

➤ PRESSURE MEASUREMENTS, continued

Multivariable for Multiple Savings

The Foxboro Model IMV25 multivariable transmitter supplies pressure, differential pressure, and temperature measurement in a single instrument. It takes full advantage of digital communications for multiple measurements.

Minimizing the number of transmitters and process penetrations will give you significant savings for purchase, installation, and maintenance.

Solve the Multivariable Flow Equation

Our Model IMV30 is designed so comprehensive flow equations reside right in the transmitter. You receive highly accurate pressure- and temperature-compensated mass or volumetric flow rate calculations.

With this impressive meter, DP at full flow can be as low as 0.12 kPa (0.5 in H₂O) and as high as 210 kPa (840 in H₂O).



▶ TEMPERATURE MEASUREMENTS

The Intelligence and Flexibility You Require

Foxboro temperature transmitters combine microprocessor-based technology with advanced packaging. Results: high reliability, maximum flexibility and exceptional intelligence.

Reduce your spare inventory by specifying one universal transmitter — suitable for integrally or remotely mounted RTD or thermocouple sensors. You save time and money with easy installation, operation, and maintenance.

Easy Configuration

Foxboro temperature transmitters do not require a separate configurator. Instead, choose our optional LCD indicator with pushbutton configuration capability.

Levels of Intelligence

Match your transmitters' intelligence level to your applications.

Analog output 4 to 20 mA versions are available with or without digital communications. A choice of HART, FoxCom, FOUNDATION fieldbus or PROFIBUS digital output versions matches your system communication requirements. Versions are available with and without local LCD indication.

Remote- or Element-Mounted Transmitters

Choose from three different housing designs to optimize the installation of either remote- or element-mounted transmitters for general-purpose or hazardous locations.

RTD and Thermocouple Sensors

Select from a wide variety of RTD and thermocouple sensors. The transmitters are configurable for compatibility with nearly all RTD and thermocouple sensor curves.

Thermowells

Thermowells are available factory-installed to minimize field assembly labor and ensure compliance with explosion-proof and flameproof electrical safety certifications.

With our RTT15, RTT20, RTT30, and RTT80 temperature transmitters, you choose the intelligence level you need, as well as multiple configuration options.



➤ LEVEL DENSITY INTERFACE MEASUREMENTS

The Right Measurements on the Level

We apply superior Foxboro Eckardt technology and experience to continuously measure the level, interface or density of liquids in industrial processes. Based on the proven Archimedes buoyancy principle and utilizing no moving parts, our level transmitters are rugged and extremely reliable, requiring virtually no maintenance.

They also supply precise measurements, even at extreme process temperatures from -196° to $+500^{\circ}\text{C}$ (-320° to $+930^{\circ}\text{F}$) and pressures from vacuum to 500 bar.

Our loop-powered buoyancy transmitters offer HART, FoxCom, FOUNDATION fieldbus or PROFIBUS communication. Plus LCDs and pushbuttons for easy calibration. Their process-wetted materials are available in steel, stainless steel, inconel, Duplex or Hastelloy C. To withstand your challenging process environment, they are FM/ATEX rated explosion-proof and intrinsically safe, approved for SIL2 applications with a proof test interval up to 5 years.

Our Level Transmitter Family

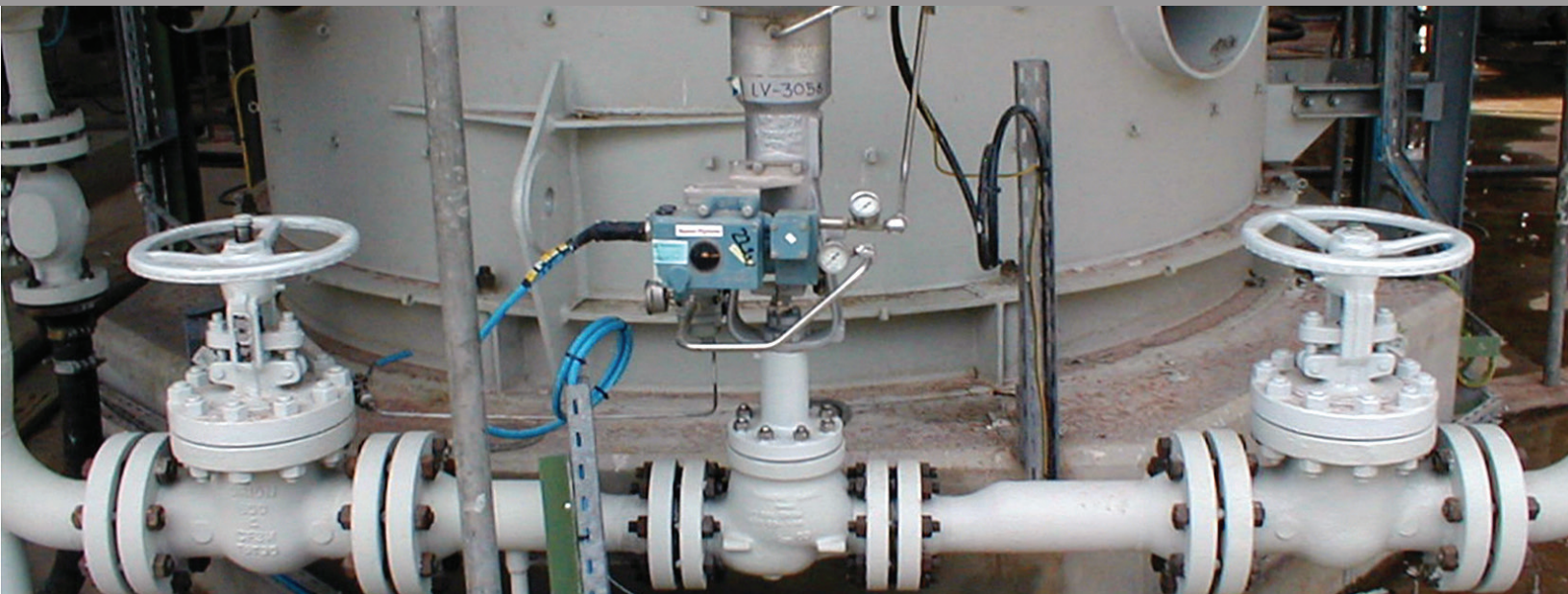
Our 244LD model, sandwich-mounted between flanges - process temperatures - from -196° to $+500^{\circ}\text{C}$ (-320° to $+930^{\circ}\text{F}$), pressures from vacuum to 250/500 bar, class 2500 and API 10000: also available with heating jacket.

Our 144LVD flange-mounted model - temperatures -50° to 120°C (-58° to $+248^{\circ}\text{F}$), pressures from vacuum to 500 bar.

Our 244LVP flange-mounted model - temperatures -50° to 150°C (-58° to $+300^{\circ}\text{F}$), pressures from vacuum to 40 bar. With HART communication, this model is the value-packed alternative to guided microwave transmitters.

Call on one reliable level transmitter family for all your measuring ranges and applications.





➤ POSITIONERS

Traditional Choice for Advanced Control

Starting in the 1960s, Eckardt valve positioners made their first substantial contributions towards safer, more economical operation in numerous plants around the world, providing dependable instrumentation for state-of-the-art automation systems. With the highest levels of quality and reliability, plus unmatched ease of handling and mounting, Foxboro Eckardt positioners can be found in more than 1 million applications worldwide.

Our conventional pneumatic and electrical models demonstrate all the traditional advantages of reliable control. Our advanced, dependable SRD line of intelligent positioners features technology for the 21st century and beyond.

Popular Positioners

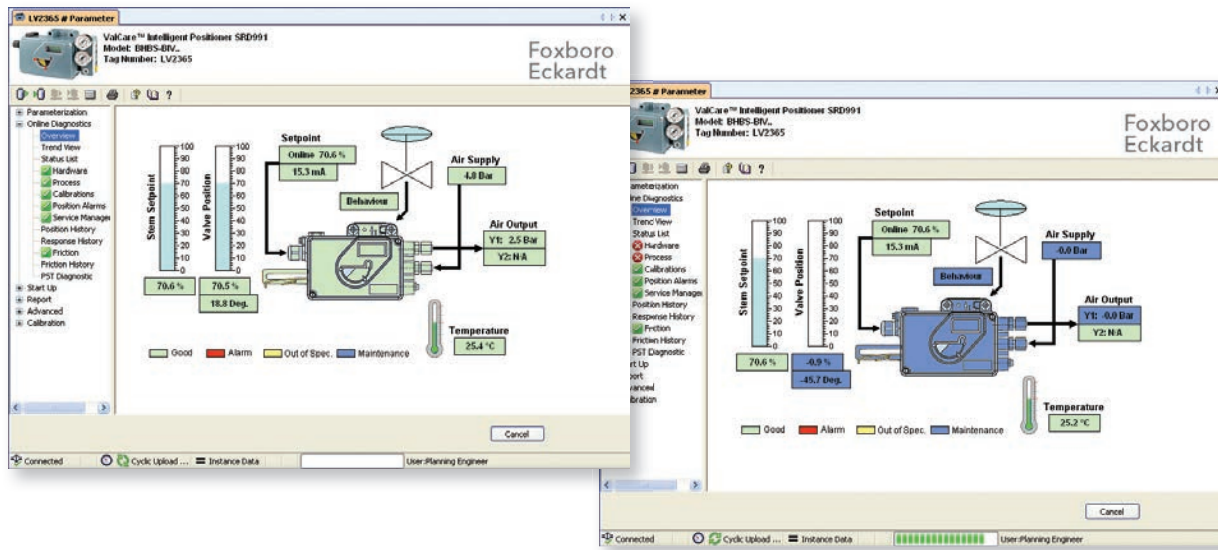
Our ultra-popular electropneumatic SRI986 line leader, as well as our SRI983 model, is available with input signal ranges from 4 to 20 mA. Our SRP981 pneumatic positioner offers an input signal range from 0.2 to 1 bar (3 to 15 psig). These instruments can be equipped with accessories from booster relays to gauge manifolds.

Flexible Position Transmitters

Foxboro Eckardt electrical and pneumatic position transmitters convert the linear or rotary movement of a valve or actuator into a standard feedback signal. This includes feedback signals from 4 to 20 mA (for our SMI983 model), proximity type limit switches, and mechanical switches (SGE985), as well as pneumatic signals (SMP981) from 0.2 to 1 bar (3 to 15 psig). A large variety of mounting kits enables mounting to all common linear and rotary actuators.

More than 1 million SRI986 applications worldwide!





Position yourself for easy installation and startup, efficient operation and maintenance, and lower lifetime costs with our SRD991 and SRD960 positioners.

➤ POSITIONERS, continued

Intelligent Positioners for Advanced Valve Control

For ultramodern capabilities plus traditional strengths, turn to Foxboro Eckardt SRD Series intelligent positioners.

Designed to operate pneumatic valve actuators, these high-performance instruments feature the latest 100% solid-state sensing and control circuitry. They boast such advantages as modular structure; upgradable electronics; easy installation and startup; IP66, NEMA 4X, and explosion-proof Class 1, Division 1 enclosures; and up to 60 percent less air consumption than conventional electropneumatic positioners.

Another sign of intelligent design: purged housings. In all SRD Series positioners, continuous rinsing with fresh process air moderates internal temperature and helps protect against environmental gases, humidity and airborne particles.

A Choice of Models

Our positioners are available in ATEX certified EEx ia versions - our SRD991 and SR1990 models. These are intrinsically safe according to FM and CSA. The SR1990 analog model offers fast startup and easy adjustment via switches and potentiometers.

A model that is flameproof/explosion-proof according to FM — an ATEX certified EEx d version. Also available is the SRD960. This high-flow positioner provides digital and intelligent capabilities.

Again, their modular structure allows all versions to use the same accessories, such as booster relays or gauge manifolds, as well as the same mounting kits.



A Host Of Advantages

The SRD991 intelligent positioner and SRD960 universal positioner offer the most advanced technology available on the market today. They provide automatic valve adaptation and easy startup, improved control performance and reduced maintenance costs.

With multiple built-in options, leading features include easy pushbutton configuration, an infrared interface for non-contact operation and configuration and a multilingual full-text graphic LCD.

A Range Of Communications Protocols

Perhaps most important, both the SRD991 and the SRD960 offer the choice of protocol including HART, FoxCom, FOUNDATION fieldbus H1 or PROFIBUS-PA. For each protocol SRD Series provide the most up to date features like function block PID, DI and DO for control in field in FF.

A Valuable Diagnostic Capability

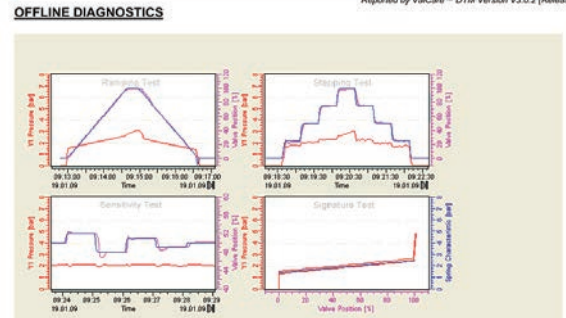
The SRD991 and SRD960 have the most advanced diagnostics capability available on the market today. The two levels of diagnostics available inside the SRD Series "Advanced Diagnostics" and "Premium Diagnostics" allow enhanced applications and methods to analyze recorded stroke data and valve signatures. This includes among others an innovative online friction calculation and signature, position and response histories, valve signatures, stepping/ramping/sensitivity signatures.

All the diagnostics features can be easily configured and display by the Positioner DTM (Valve Monitor). The SRD Series DTM is fully compliant with the FDT standard and certificate for all protocols by FDT Group.

Moreover, the DTM gives the possibility to generate a "Valve Health Report" made with all data of the configuration and diagnostics. This report can be printed or stored as a PDF file for archive.

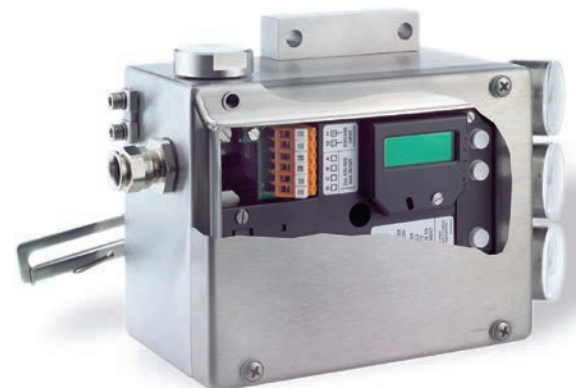
SRD960 or SRD991 for ESD Valves

Our SRD positioners' Partial Stroke Test (PST) functionality offers operators a troubleshooting tool for emergency shutdown valves. PST is part of a global solution developed with Triconex safety systems, Foxboro DCS, and Avantis condition monitoring.



Valve Health Report generated by SRD's STM.

Foxboro Eckardt positioners have been proven performers over many years in thousands of plants across the globe.





Analyze or control the pH, oxidation-reduction potential (ORP), conductivity, or resistivity of your process with exceptional echem solutions such as our 875 Series analyzer.

▶ 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 45-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 remote auto-service for sensor cleaning and calibration. 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.

The Ease-of-Use Transmitter Standard

The Foxboro 870IT 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 870IT is loop-powered, yielding lower wiring costs. This transmitter is also intrinsically safe and certified for Class I, Division 1 areas.

For the lower wiring costs of a loop-powered instrument, turn to our popular 876 transmitter.



➤ ELECTROCHEMICAL MEASUREMENTS, continued

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 6.9 bar (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.

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

Foxboro's unique 871FT sanitary electrodeless conductivity flow-through sensor.



Foxboro's unique FT10 all-virgin-PFA flow-through electrodeless conductivity sensor for specialty chemical, high-purity and semiconductor applications.



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



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.



➤ MAGNETIC FLOWMETERS

The Versatile Solution for Most Flows

Need a magnetic flowmeter that performs well, works with most applications, and delivers low total cost of ownership? You need our tough, versatile Foxboro magnetic flowmeter with dc excitation.

This efficient system comprises a Foxboro flanged body, wafer body, or sanitary magnetic flowtube coupled to an IMT25 Series intelligent magnetic flow transmitter.

Our transmitters boast such desirable features as automatic/manual empty tube pipe detection, bidirectional measurement, contact inputs for remote operability, and relay outputs for alarm functionality. You also receive flexible configuration to fit your control scheme; easy programming; and durable, modular construction.

Our flowtubes are available in a wide range of sizes (0.1-78 in, 3-2000 mm) with an extensive variety of industrial and sanitary options.

These flowtubes can be used with most conductive fluids, including hard-to-handle liquids and slurries. Retained, reinforced PFA liners withstand even severe process temperature swings to 180°C (356°F) and process pressures from full vacuum to 51 bar (740 psi).

You also get a wide variety of mounting options, line sizes and configurations.

Result: a compact pulsed dc magnetic flow system that provides unequalled durability and performance with low cost of ownership.

Our complete magnetic flowmeter family sets an industry standard for wide-ranging excellence.





Other Standard Flow Products

Also, look for our workhorse magnetic flowmeters with ac excitation or visit www.FlowExpertPro.com for easy sizing and selection.

Foxboro flow expertise stretches from the process industry's first mag flow system in 1954 to dc pulsed mag transmitters in 1983. Today, we are developing even better answers for your flow future.

The Breakthrough Technology for Your Toughest Flow Problems

Only one magnetic flowmeter solves your most challenging flow problems. The Foxboro MagEXPERT™ IMT96 squelches noise and boosts performance on your worst flows. For less extreme applications, see our dc magnetic flowmeters.

MagEXPERT's revolutionary eX-Pulse technology combines the ease and reliability of traditional ac meters with the accuracy that intelligent dc meters promise but cannot always achieve.

Result: clean, accurate, and reliable measurement where solids or additives generate unacceptably high process signal noise. Including chemical additives, slurries, and high-consistency or pulsating flows.

Like most Foxboro flow solutions, MagEXPERT provides online, intelligent diagnostics and help; simple, menu-driven software configuration; compatibility with A/C MAGS 2800; high accuracy and fast response; plus durability and ease of use.

**Our revolutionary
MagEXPERT IMT96
flowmeter is the only solution
specifically designed for your
greatest flow challenges.**





Get accurate measurement of liquid, gas, or steam with our high-temperature vortex flowmeter.

▶ VORTEX FLOWMETERS

The Industry's Most Popular Vortex Meter Choice

Foxboro's 84 Series intelligent vortex flowmeters are proven to be the best choice for meeting many of the accuracy, dependability, and cost challenges your process can present.

Forget about specifying different models for liquid, gas, and steam measurements. With the Foxboro vortex flowmeter, a single sensor design handles the majority of your measurement needs. Therefore, you simplify ordering, reduce inventories and cut overall costs. Even after years of hard use, you continue to receive predictable, long-term, accurate performance, with a minimum cost of ownership.

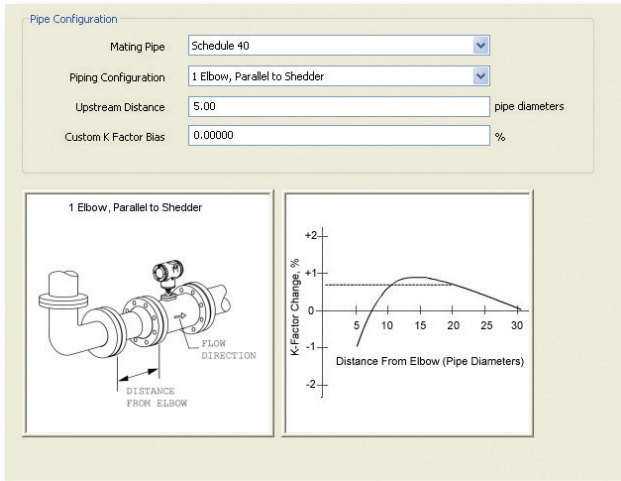
Smart, Durable Design

The Foxboro vortex flowmeters handle numerous difficult-to-measure process flows, including molten sulfur, chlorine, and beer.

From the patented shape of the shedding element — with no moving parts to wear out and degrade accuracy — to the sturdy construction, these meters are designed with intelligence.

Patented "Direct Sense" vortex sensing places the sensor in the correct location for the widest rangeability and best low-flow performance. The toughened sensor (backed by a lifetime warranty) stands up to harsh processes, as does the rugged, epoxy-coated housing. An optional isolation manifold will allow you to replace the entire sensor assembly without shutting down your process.





Built-in configuration tools for real-world applications.



Trending you can customize.

A Choice of Versions

Our flanged-body and wafer-body vortex flowmeters measure liquid, gas, or steam at process temperatures up to 430°C (800°F). Our 3A approved sanitary version has a crevice-free design for inline cleaning.

Intelligence in Every Model

All Foxboro intelligent vortex flowmeters possess excellent low flow rate characteristics, wide rangeability and online diagnostics.

Like many Foxboro instruments, they can be remotely interrogated or configured by your choice of PC software using FoxCom, FOUNDATION fieldbus or a HART Model 375 configurator.

Searching for a great vortex meter? Look no further than Foxboro. Visit www.FlowExpertPro.com for help with sizing and selection of a vortex flowmeter that meets your liquid, gas, or steam flow measurement needs.

Standard temperature can be measured by this wafer-body model.

Our sanitary intelligent vortex meter is 3A authorized for applications that require crevice-free design to enable inline cleaning.





With single-path construction, our CFS10 flowtubes provide obstruction-free flow-through and positive cleaning. Clogging is virtually eliminated. The no-splitter design means process fluid is never damaged.

➤ MASS FLOWMETERS

The Meter for Your Problem Process Flows

Hard-to-measure fluids can cause difficulties for other mass meters, ruining their accuracy and reliability.

Not Foxboro mass flowmeters.

Our innovative designs handle more problem fluids than anything else in their class. Changes in density, pressure, temperature, viscosity, or flow profile have virtually no effect. (One amazing model can even handle fluids with entrained gas — see opposite page.)

These Coriolis mass flowmeters are comprised of Foxboro CFT mass flow transmitters in conjunction with CFS mass flowtubes. They deliver highly accurate, direct measurement of total mass, volume flow and concentration of mixtures. They are your meters of choice to measure the mass flow of conventional liquids — plus non-Newtonian fluids; viscous, abrasive, and shear-sensitive fluids; slurries; and liquefied gases.

Our clean-in-place flowtube construction makes sanitary applications a specialty. Where competitive designs bend, Foxboro mass flowmeters give just a slight twist. You get added insurance against metal fatigue.





The Meter that Bursts the Entrained Air Bubble

There is one application type even the best Coriolis meters have trouble handling: fluids with entrained air bubbles. Even the smallest bubbles in the process fluid can seriously interrupt or even stall your measurement.

Finally, there is a Foxboro solution for even this formerly intractable difficulty. The CFT51 digital Coriolis mass flow transmitter bursts the entrained air bubble problem forever.

First to Find the Fix

The CFT51 solves the problem as nothing has done before. Foxboro's patented software based system prevents the erratic liquid/gas flowtube vibrations that cause measurement failures, by maintaining a digitally precise process flow measurement — while simultaneously retuning the drive of the Coriolis flowtube every half-cycle of the drive frequency.

This completely eliminates air-induced interruptions or stoppages during two-phase events. You can measure from liquid to gas back to liquid and everything in between. This allows batch operations from an empty tube to a full tube, back to an empty tube, without ever waiting for a full flowtube. Result: no lost product or below-spec batches.

The CFT51 offers superior response times — better than ten times faster than other mass meters. It is ideal for small batches as well as small-volume proving. Nothing else on the market can successfully tackle these challenging applications. For cheese making, pulp & paper coatings, foaming fluids, tanker truck/railcar unloading, and more, turn to the astonishing CFT51 mass flow transmitter.

Visit www.FlowExpertPro.com to help with sizing and selection of this and other Foxboro meters.

Our amazing CFT51: it handles the bubbles that can stop a conventional mass flowmeter in its tracks.





Our 6000AF Series graphic recorders offer vast capability of electronic data storage and communication with vivid high resolution color display.

▶ CONTROLLERS & RECORDERS

The Solution for Accuracy, Reliability, Innovation

Foxboro electronic panel- and field-mounted instruments include a full range of products for controlling, recording, and indicating process variables.

Our controllers and recorders have earned a reputation for accuracy and reliability — and solid innovation as well. Example: exclusive EXACT self-tuning employs the principles of artificial intelligence to adapt tuning parameters for optimum disturbance response.

State-of-the-Art Recorders

The 6000AF Series Paperless Graphic Recorders eliminate the need for paper charts while providing ease of use, security and adaptability for all your data management requirements.

Other reliable recorders include our 763 recorders and 740R circular chart with dot matrix display.

Efficient Controllers

Our 762C Series offers EXACT in an advanced, microprocessor-based controller; 743CB models add a NEMA 4X enclosure.

Other Foxboro controllers include the 718 and 716 DIN size controllers for single loops and the combination 740C Series digital circular chart recording controller.





➤ MEASURING UP TO THE FUTURE

The story of Foxboro Field Devices does not end here. Want more information on current and future developments? Ask our sales or service people. Call our technical support centers. Visit our Web site.

You will find that Foxboro instruments offer complete, bi-directional communications in multiple protocols, including fieldbus. Therefore, you receive seamless integration with our world-renowned automation systems and services, for the industry's only single, unified automation and information platform covering all facets of field and plant operation.

Results: significant increases in asset utilization and productivity; powerful new functionality; plus major savings in time and costs for commissioning, startup, operations and maintenance.

Visit fielddevices.foxboro.com to obtain in-depth spec sheets and drawings and locate the information you want when you want it, fast.

You will discover that on www.buyautomation.com you can check your order status in real time.

Soon you will receive even more from one intelligent, integrated source, with more innovations in instruments, service and cybersupport on the way. At Foxboro, we anticipate what you need now — and how you will want us to measure up in the future.



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