The Unique DolpHin™ Family of High-Performance pH Sensors

DolpHin™ Advantages

- Double the service life in high-temperature and temperature-cycling applications
- Unparalleled ease of installation, operation, maintenance, replacement
- Fast pH and fast temperature response
- High stability and accuracy
- Unbeatable adaptability and rugged construction

www.fielddevices.foxboro.com

Life Is On

Foxboro®
by **Schneider** Electric

DolpHin pH™ Sensors

DolpHin pH™ sensors deliver twice the life in your most challenging applications — plus ease of use the industry has never seen before. And their one-sensor-fits-all design greatly simplifies your inventory efforts.

These industry-leading sensors are already proven in countless installations including chemicals, pulp & paper, all kinds of industrial & municipal water/wastewater treatment, metals/mining, and food & dairy applications worldwide.

DolpHin construction

❶ Nafion tube with internal reference electrode
  • Minimal variability of junction potential for reduced noise and drift
  • Reduced clogging of outer junction from silver ion migration

❷ High-temperature reference gel
  • Long life in high-temperature service

❸ RTD and solution ground assembly
  • RTD — close thermal proximity to process for fast, accurate temperature
  • RTD — close thermal proximity to measuring & reference electrodes for accurate temperature compensation of pH
  • Nonmetallic solution ground for wider chemical compatibility

❹ Ceramic reference junction
  • Ideal size and porosity for optimal stability of junction potential, stable measurement

❺ Unique glass pH electrode
  • Long life in high-temperature and temperature-cycling applications
  • Fast pH response for better process control, reduced calibration time for operator

Performance

You know the problem: pH sensors need replacement every time you turn around.

All except our unique DolpHin sensors.

Many users report they last twice as long — or even longer — in their most challenging process environments. Including high-temperature and temperature-cycling applications up to 121°C (250°F).
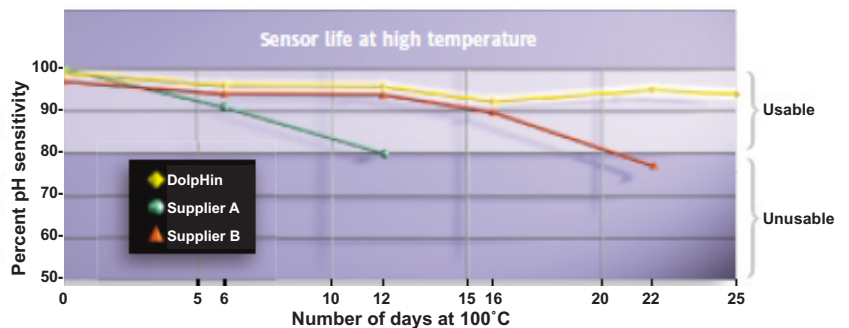
They also maintain temperature response up to twice as fast as conventional sensors in the same conditions.

How do we accomplish this? With our innovative, patent-pending pH glass formulation. A reference electrode featuring high-temperature gel and Nafion ion barrier. Options such as an integral protective guard or an integral preamplifier.

Plus durable construction with inert parts and a mechanical design that facilitates installation, removal, cleaning, and calibration.

Results: fewer probe replacements and maintenance calls. Amazingly, some plants that used to trash pH sensors every 2 weeks replace their DolpHin sensors as seldom as every 6 months!

You also get high accuracy and stability, plus fast response for tighter process control, enhanced product quality — and significant cost savings.

Sensor life at high temperature

- DolpHin
- Supplier A
- Supplier B

Percent pH sensitivity (50–100)
Number of days at 100°C (0, 5, 6, 10, 12, 15, 16, 20, 22, 25)

Usable / Unusable

One basic probe fits all

Universal bore piece

Threaded flow chamber

Standard tee

Adjustable insertion assembly

ANSI and DIN flanges

Variopin connector

Universal bushing mount

Ease of use

More than anything else on the market, DolpHin disposable pH sensors are packed with features that make them easy to use.

Their connection story is beyond compare. For instance, our optional Variopin quick connector cuts maintenance costs and reduces sensor hookup time. You don't have to replace the sensor cable, open the analyzer, or even use tools.

The DolpHin universal bore piece mounting design eliminates cable wind-up. It offers two different standard insertion dimensions, and allows mounting on virtually any process connection — including tees, tri-clamps, ANSI flanges, flow chambers, and more!

And our optional retractable assembly gives you a purgeable chamber and field-adjustable insertion depth.

So with DolpHin sensors, you get fewer wiring hassles. No cable wind-up to frustrate threading-in. Easy installation and removal. And the safest possible insertion, with options like our insertion assembly.

Adaptability

Other sensors demand you research, specify, order, stock, train on, and maintain a bewildering variety of sensor form factors.

Why not use one basic yet superior sensor that can be installed to a variety of different mounting options for all your pH and ORP measurement needs? The one-probe-fits-all design of DolpHin sensors is a welcome relief from most other models on the market. You get almost infinite adaptability for valve insertion, threaded universal bushings, tees, flow chambers, or tri-clamp flanges.

Standardizing on DolpHin sensors greatly simplifies your inventory and storage — and ensures you have just the sensor you need, just when you need it.

Advantages of a complete Foxboro pH system

DolpHin™ sensors work well with many of your existing third-party analyzers. But consider adding a Foxboro analyzer for the easiest-to-use complete pH measurement system on the market.

You can then take full advantage of the industry's most advanced sensor diagnostics. Digital communications, including sensor health, are enabled by Foxboro analyzers' state-of-the-art FDT/DTM (field device tool/device type manager) technology. So your sensor data can be communicated to a standard PC.

You get effortless, intuitive sensor-to-analyzer wiring with matched connections. And you can utilize all advanced Foxboro sensor capabilities, including the DolpHin preamplifier or its 3-wire RTD.

Results: unparalleled ease of use — and more accurate measurement.