

# Foxboro® FT10 Electrodeless Conductivity Sensor



## FT10 Sensor Description

The unique FT10 by Foxboro® introduces a new multi-toroid, patent-pending measurement approach to electrodeless conductivity. The FT10 all-Teflon sensor introduces a new, compact, high-accuracy solution for applications requiring low liquid volume and high purity. The advanced FT10 sensor provides an innovative approach in a clean, simple, noninvasive design package for very demanding applications, including measurement of high-purity and/or aggressive chemical concentrations. These include hydrofluoric, hydrochloric, nitric, and sulfuric acids; TMAH; and ammonium hydroxide. So this sensor will prove indispensable in manufacturing semiconductors, electronics, LCD assemblies, specialty chemicals, and more.

In just one critical example, those seeking accurate measurement of high-purity hydrofluoric acid, in all concentrations from very dilute to concentrated, have previously been limited to an extremely expensive variety of in-line sensor. Now the Foxboro FT10 design provides significantly improved performance — at a much more competitive price. This will prove especially attractive for makers of wafer processing equipment, including chemical delivery systems for semiconductor facilities.

## Features/Benefits

- A new Foxboro patent-pending, multi-toroid approach to electrodeless conductivity
- Virgin Teflon-wetted material for high-purity applications
- All fused connections; no threads, O-ring, or gasket seals
- Handles liquids from hydrofluoric, hydrochloric, nitric, and sulfuric acids to TMAH and ammonium hydroxide
- Highly accurate measurements for semiconductor, other electronics, LCD assemblies, specialty chemicals, etc.
- Noninvasive, multi-toroid design
- Ideal for high-purity applications with low liquid volume and small line size
- Improved performance at an extremely competitive price
- Choice of Teflon tube sizes 1/2", 3/4", and 1.0"

# FT10 Electrodeless Conductivity Sensor



## Specifications

|  |  |   |   |
|--|--|---|---|
| <p><b>Maximum Temperature</b></p> <p><b>Pressure Range</b></p> <p><b>Wetted Materials</b></p> <p><b>Internal Integrity</b></p> <p><b>Sensor</b></p> <p><b>Sensor Housing</b></p> <p><b>Sensor Housing Dimensions</b></p> <p><b>Sensor Mounting</b></p> <p><b>Process Connections</b></p> <p><b>Tubing Size</b></p> <p><b>Flush Rate (100%)</b></p> <p><b>Cell Factor (elec. &amp; geom.)</b></p> <p><b>Conductivity Range (full-scale)</b></p> <p><b>Temperature Compensator</b></p> | <p>To 140° C</p> <p>To 100 psig</p> <p>Teflon PFA</p> <p>Leak-free weld connections, no internal threads, no O-ring or gasket seals</p> <p>Multi-toroid (Foxboro patent pending), noninvasive, completely nonmetallic design</p> <p>Utilizes UHMW (ultra-high molecular weight) polyethylene rectangular enclosure</p> <p>~ 7" L x 5" H x 2" W = rectangular</p> <p>Pipe or surface mounting capability</p> <p>Select Flaretek, Nippon Super Pillar 300, or undressed (bare tube)</p> <p>Choice of 1/2", 3/4", or 1.0"</p> <p>Less than 30 seconds</p> <p>Referenced on label<br/>Determined experimentally for each tubing size.</p> <p>From 0 to 500 µS/cm up to 0 2000 mS/cm (tube-size-specific)</p> <p>3-wire 1000 ohm RTD, or<br/>3-wire 100 ohm RTD</p> | <p><b>Electrical Connections</b></p> <p><b>Sensor Cable</b></p> <p><b>Testing</b></p> <p><b>Material Certification</b></p> <p><b>Pressure Certification</b></p> <p><b>Safety Certifications</b></p> <p><b>Label</b></p> <p><b>Warranty</b></p> <p><b>Foxboro HF Policy</b></p> <p><b>Literature</b></p> | <p>Calibration port (EP485N compatible), sensor/RTD cable (871FT calibration cable and patch cord compatible)</p> <p>Patch cord utilizing Tajimi (mil spec) connector, or integral cable of PVC or Teflon</p> <p>Each sensor tested prior to shipment</p> <p>Shipped with each sensor (vendor-supplied) (all Teflon)</p> <p>Shipped with each sensor (vendor-supplied)</p> <p>FM, ATEX, CSA, U.L. Both intrinsically safe and nonincendive certifications — applied for prior to release.</p> <p>Includes geometric and electrical cell factor and recommended flow direction. Recommended flow is vertical, with flow from the bottom.</p> <p>One year — full workmanship</p> <p>Shipped with each sensor Master Instructions. Briefly: NO product exposed to hydrofluoric acid (HF) will be returned to Foxboro for any reason.</p> <p>PSS 6-3Q1B, MI 611-217, D.P. 611-217, MI 611-220</p> |
|--|--|---|---|