



FOX CROFT EQUIPMENT AND SERVICE COMPANY, INC.  
**FX-300 Integrated Fluoride Ion Selective Sensor Specifications**  
**For Low pH Service Applications & Acid Cleaning**

**Part number:** SFL-8U-UL-G-10

1" x 1-1/4" MNPT, Combination Fluoride Ion Selective Sensor for use in low pH applications, acid cleaning capability, submersible or insertion mounting only, not for inline mounting.

**Recommended Applications:** Specially designed for Fluoride ion concentration in continuous low pH solutions from 0.0 - 6 pH. Wastewater treatment of acid fluoride solutions for etching metal, glass, and silicon wafers. Applications requiring strong acid cleaning for CaF<sub>2</sub> buildup removal

**Special Features:** Crosslinked polymer in the reference system is resistant to heat, solvents and to most chemicals. Sensor holds an excess of KCl, assuring saturation at all temperatures and extending the life of the sensor.

The ion sensitive part of the sensor is designed to resist the attack of acids, typically used in fluoride etching processes.

The construction of the sensor permits easy access to the sensing and reference surfaces for cleaning or inspection.

**General Specifications:**

Concentration Range: 1 to 10<sup>-6</sup> Molar, 19,000 to 0.019 ppm

Lowest Limit of Detection 5X10<sup>-8</sup> Molar, .001 ppm

pH Range: 0 to 9.5 pH (continuous), up to 11pH intermittently

Temperature Range: 5 to 50 ° C

Pressure Range: 1 to 20 psig (6.9 to 138 kPag)

Body Material: Ultem (Poly-Ether-Imide)

Junction Material: Kynar (Poly-Vinylidene-Fluoride)

Cable: RG 174/U Coaxial (without preamplifier)

Connector: BNC (unless otherwise specified)

**Ion Sensor Specifications:**

Measuring Membrane: Selective Fluoride Sensitive Membrane (solid state)

Dimensions: 0.310, (7.8 mm) DIA

Initial Impedance: Less than 100 M Ohms @ 25 ° C

Interfering Ions:

Given in Ratios of Permissible Excess:

Interfering Ion / Measured Ion (in Molarity): OH<sup>-</sup> above 12.0 pH

**Reference System Specifications:**

Type: Double Junction

Reference Half Cell: Ag/AgCl, Saturated KCl

Primary Junction: Porous Ceramic, Saturated KCl in crosslinked polymer

Secondary Junction: Porous Kynar, Saturated with KCl in crosslinked polymer

Surface Area: 400,000 mil<sup>2</sup>, (236 mm<sup>2</sup>)

Storage and Shelf Life: At room temperature with closed protector cap, 1 year from date of manufacture

Standard Hook-Up Options:

No Preamp - BNC Connector + TC lead wires

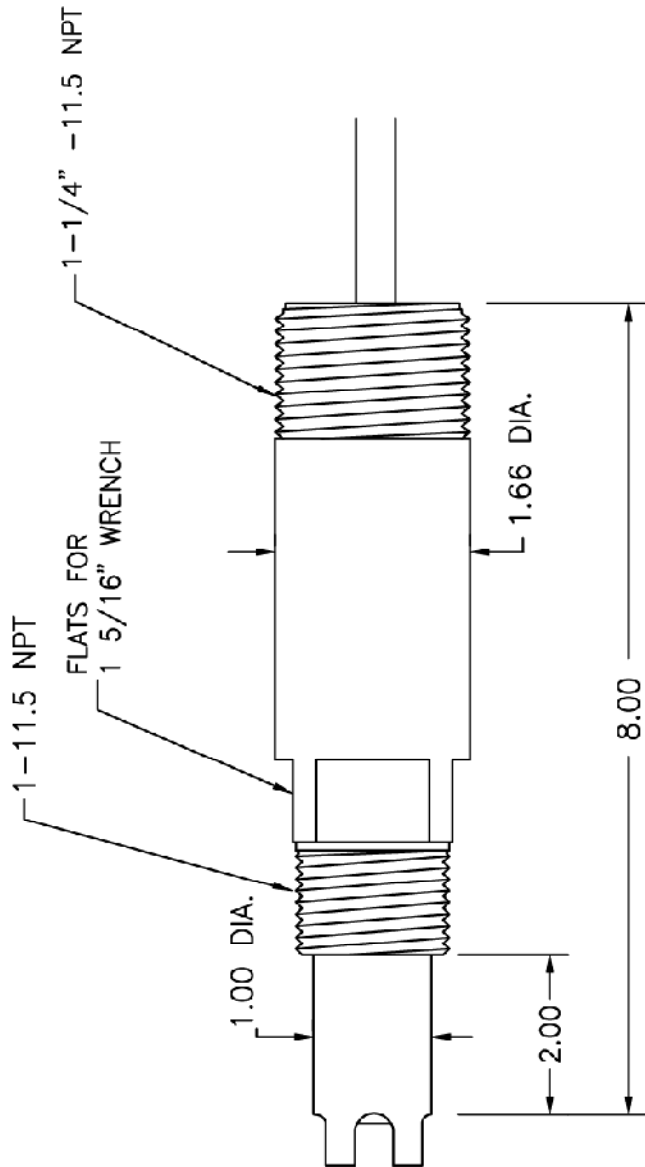
With Preamp – Multiconductor Lead Wires – See Hook Up Schematics

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