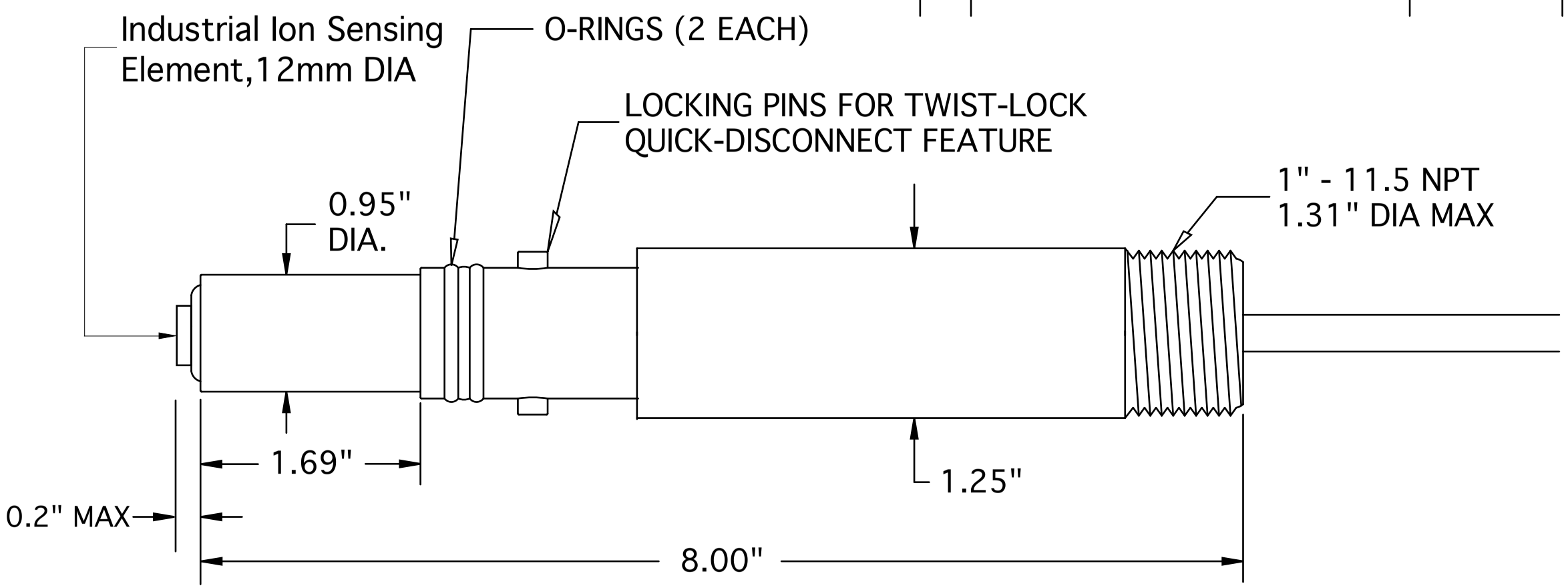
Sensor Part Number & Short Description:	**AB 8100 – Fluoride (F^-)** Industrial Ion Selective (ISE) Twist Lock Sensor for Inline Quick Disconnect (w/ Double O-rings) & 1" MNPT for immersion/submersible use
Configuration Type:	*Interface with Twist Lock Quick Disconnect Receptacle for Inline Use or 1" MNPT rear threads with insertion tube for immersion or waterproofing seal for submersible installs*
General Sensor Specifications:	
Operating Temperature Range:	+5 to +50 °C Continuous
Operating Pressure Range:	1 to 20 psig (6.9 to 138 kPa) with 1"MNPT KYNAR® (PVDF) Twist Lock Receptacle
Sensor Body Material:	RADEL® R-5000 NT (Poly-Phenyl-Sulfone, PPSU)
Junction Support Matrix Material:	High-Density Polyethylene (HDPE) Standard KYNAR® (Poly-Vinylidene-Fluoride, PVDF) Optional
O-Rings Material of Construction:	Viton®-75 is standard, 2 each redundant O-rings are used to ensure seal integrity
External Dimensions:	See Drawing 8-ISE
ISE Measurement Specifications:	
Linear Measurement Range:	0.019 to 19,000 ppm ($1X10^{-6}$ to 1.0 Molar)
Lowest Limit of Detection	0.001 ppm ($5X10^{-8}$ Molar)
Interferring Ion(s):	OH^- when pH is above 12.0
Suitable pH range:	5.5 to 9.5 *
Cases where AB 6100 must be used:	* If pH is below 5.5 or above 9.5 then the AB 6100 sensor must be used instead.
ISE Sensing Element Dimensions:	0.315" (8mm) DIA active sensing region, 0.472" (12 mm) DIA overall sensing electrode
Initial Impedance:	< 20 MΩ @ 25 °C
Reference System Specifications:	
Type:	Double Junction Standard (Triple Junction Optional, Alpha Prefix "TJ")
Reference Half Cell:	Ag/AgCl, Saturated KCl
Primary Junction:	Porous Ceramic, Sat. KCl in crosslinked polymer, Interfaced to Secondary Junction
Secondary Junction:	Solid-State Non-Porous Cross-Linked Polymer embedded in HDPE/KYNAR Support Matrix holds excess KCl assuring saturation at all temps for stability & long sensor life
Supported Order Options with Alpha Prefix Order Code Designation: ***Inquire to factory for specials***	3-Wire TC ("M"), ACCU-TEMP Fast Response TC ("X"), Two each Protective Tines Configuration ("GRO"), No Protective Tines ("NG"), Shielded Preamp Cable ("BL")
Example Recommended Applications:	Municipal potable water and water treatment facilities (POTW) for monitoring and/or control of fluoridation process. Industrial facilities required to monitor and/or treat the fluoride ion level prior to discharge for compliance and other environmental remediation. Environmental monitoring in rivers, lakes and ponds for public health and safety. Any free fluoride ion measurement that needs to operate with minimal cleaning & recalibration frequency (i.e. remote sites that are unattended for long periods of time). Solid-state fluoride monocrystal and conductive-polymer reference system allows for extremely low cost-of-ownership without any costly reagents or sample conditioning.
Storage and Shelf Life:	One (1) year from date of dispatch from factory when stored at indoor ambient room temperature with proper orientation & protector cap.
Available Configurations & Options:	
Integrated Components:	- Pt1000 Temperature Compensation Element - Analog Conventional Preamplifier (Optional for noisy areas and/or long cable runs)
Analog Sensors without integral preamplifier:	Terminated with Tinned Lead Wires (-TL)
Analog Sensors with integral preamplifier:	Terminated with Tinned Lead Wires (-TL) or Quick Disconnect NEMA 6P Snap (-Q7M)

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



NOTES

1. All dimensions are in inches, unless otherwise indicated with tolerances as detailed below
2. Sensor body material of construction is RADEL for all 8XX0 series ion selective (ISE) models
3. O-ring material of construction is Viton-75 standard; CV75, Simriz 485 & Kalrez 4079 Optional
4. Drawing as shown is without protective tines. The maximum displacement of the sensor past the end of the body in this configuration is 0.2" inches yielding a max overall length of 8.2 inches.
5. With Protective tines "GR" (4 places, 90 degrees apart) or "GRO" (2 places, 180 degrees apart) configurations overall sensor length is 8.00 inches.
6. This sensor is only suitable for inline installation when used with ASTI 1" MNPT Twist Lock Receptacle.
7. Do not use any sensor beyond the factory defined maximum temperature or pressure rating.

TOLERANCES	
1 Place: ± .1	3 Places: ± .005
2 Places: ± .01	4 Places: ± .0005
Angular: ± 0.25°	

DRAWN BY: RH
CHECKED BY: TADP
APPROVED BY: MJP

Advanced Sensor Technologies U.S.A.
Website: http://www.astisensor.com

TITLE: Sensor for Inline Twist Lock Quick Disconnect Use

SIZE	PROJECT	DRAWING NO.	REV
B	TWIST-LOCK	8-ISE Ion Selective Sensor	/

SCALE Not to Scale | MODEL 8XX0 | SHEET 1 OF 1