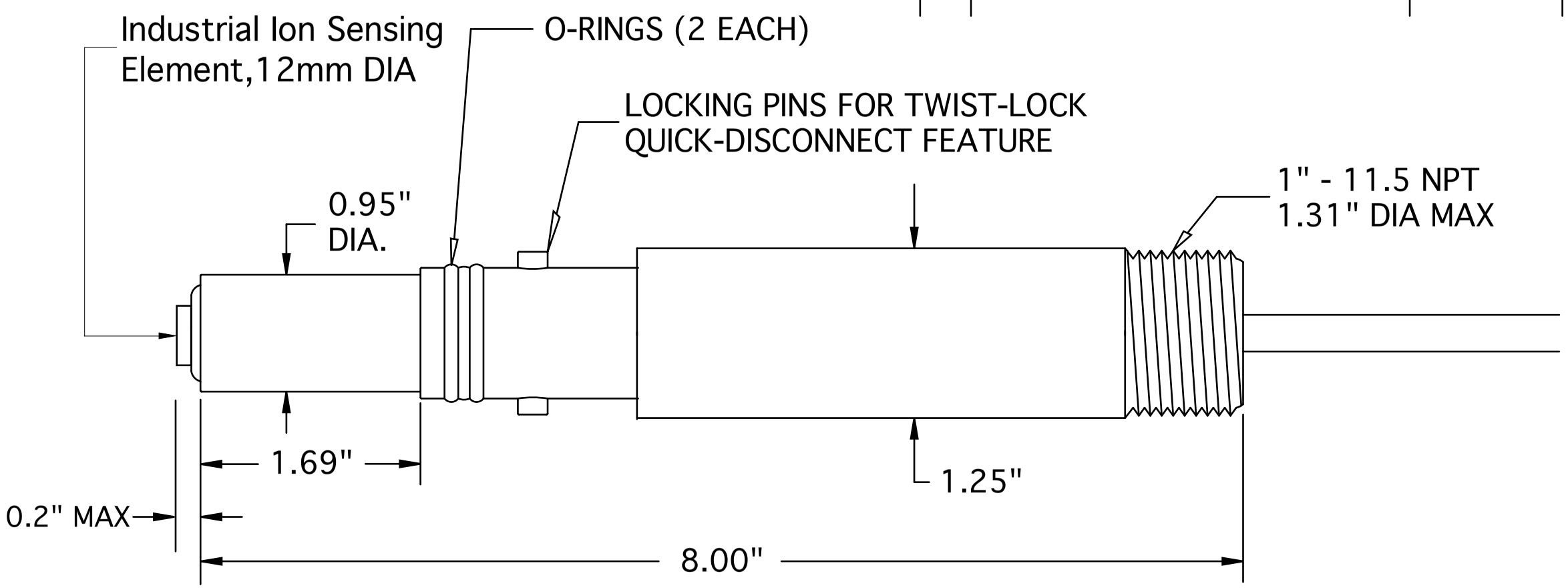
Sensor Part Number & Short Description:	**AB 8430 – Sodium (Na^+)** Industrial Ion Selective (ISE) Twist Lock Sensor for Inline Quick Disconnect (w/ Double O-rings) & 1" MNPT for immersion/submersible use
Configuration Type:	*Interface with Twist Lock Quick Disconnect Receptacle for Inline Use or 1" MNPT rear threads with insertion tube for immersion or waterproofing seal for submersible installs*
General Sensor Specifications:	
Operating Temperature Range:	+5 to +40 ºC Continuous (Maximum +50ºC with Ultralow Option)
Operating Pressure Range:	1 to 10 psig (6.9 to 69 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 for Standard & Ultralow Measurements KYNAR® (Poly-Vinylidene-Fluoride, PVDF) Optional for Aggressive Service Conditions
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:	2.3 to 23,000 ppm ($1X10^{-4}$ to 1.0 Molar)
Lowest Limit of Detection:	0.23 ppm ($1X10^{-5}$ Molar, a.k.a. 230 ppb)
Given in Ratios of Permissible Excess: Interferring Ion / Measured Ion (in Molarity)	K^+ (100), NH_4^+ (1,000), Li^+ (1,000), Mg^{2+} (5,000), Ca^{2+} (5,000)
Suitable pH range:	4.0 to 8.0 continuous (pH down to 2.0 and up to 10.0 for Intermittent Use Only) *
pH Considerations	* Note: The suitable measurement range will vary based upon the typical pH value of the sample to be measured as well as the extent of change in the pH during the timespan of the measurement. Please inquire to factory for specific feasibility review of your planned field measurement and process media.
ISE Sensing Element Dimensions:	0.315" (8mm) DIA active sensing region, 0.472" (12 mm) DIA overall sensing electrode
Initial Impedance:	< 100 MΩ @ 25 ºC Standard Version, < 300 MΩ @ 25 ºC with Ultralow Option
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:	Dissolved gas resistant ("A"), 3-Wire TC ("M"), ACCU-TEMP Fast-Response TC ("X"), 4 each Tines ("GR"), 2 each Tines ("GRO"), Shielded/Reinforced Preamp Cable ("BL")
Example Recommended Applications:	Industrial, municipal and food facilities that desire to monitor the sodium ion activity of the process samples as well as environmental monitoring in rivers, lakes and ponds for public health and water quality.
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