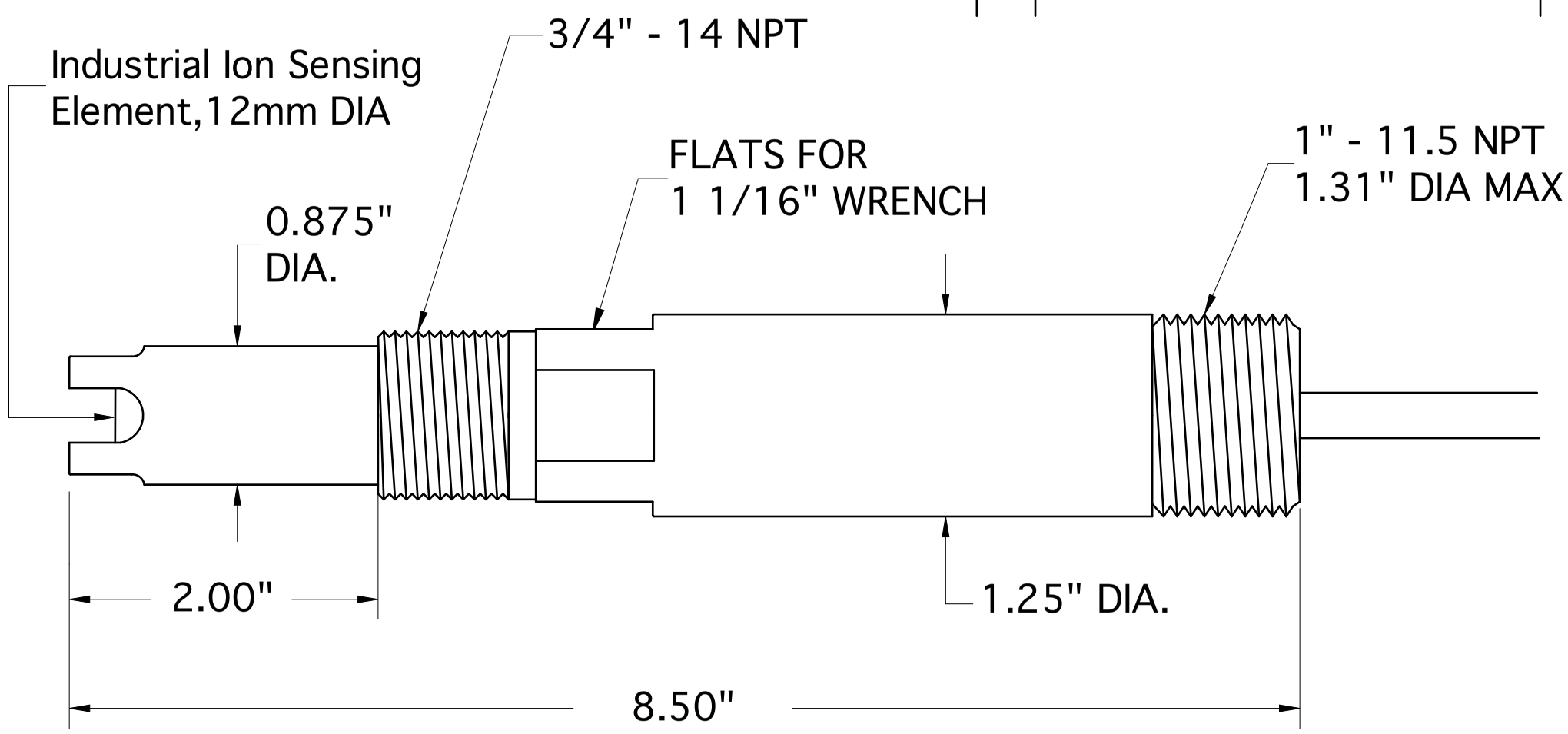
IOTRON™ SENSORS
INTEGRATED INDUSTRIAL ION SELECTIVE SENSOR SPECIFICATIONS

Sensor Part Number & Short Description:	**AB 6810 – Nitrate (NO_3^-)** Industrial Ion Selective (ISE) Inline, Immersion & Submersible Sensor; ¾" MNPT for Inline & 1" MNPT for Immersion/Submersible Use
Configuration Type:	*Interface with ¾" FNPT threads of tee for Inline Use or 1" FNPT threads on insertion tube for immersion or waterproofing seal for fully submersible installations*
General Sensor Specifications:	
Operating Temperature Range:	+5 to +40 °C Continuous, Maximum +50 °C Intermittent
Operating Pressure Range:	1 to 10 psig (6.9 to 69 kPa) with ¾" MNPT Front Threads for Inline Installations
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
External Dimensions:	See Drawing 6-ISE
ISE Measurement Specifications:	
Linear Measurement Range:	6.2 to 62,000 ppm (10^{-4} to 1.0 Molar)
Lowest Limit of Detection	0.62 ppm (10^{-5} Molar)
Given in Ratios of Permissible Excess: Interferring Ion / Measured Ion (in Molarity)	ClO_4^- (0.006), I^- (0.42), Br^- (74), NO_2^- (219), Cl^- (2,754) **NO AMOUNT OF UNBOUND SULFIDES MAY PRESENT!**
Suitable pH range:	4.0 to 9.0 (Inquire if measurements are to be performed below or above this range)
ISE Sensing Element Dimensions:	0.315" (8mm) DIA active sensing region, 0.472" (12 mm) DIA overall sensing electrode
Initial Impedance:	< 1500 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***	ACCU-TEMP Fast-Response TC ("X"), 4 each Tines ("GR"), 2 each Tines ("GRO"), Shielded/Reinforced Preamp Cable ("BL")
Example Recommended Applications:	Industrial facilities required to monitor and/or treat nitrate levels prior to discharge for compliance and environmental remediation. Environmental monitoring in rivers, lakes and ponds for public health and safety. Any nitrate measurement that needs to operate with minimal cleaning & recalibration frequency such as remote or unmanned sites.
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
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 6XX0 series ion selective (ISE) models
3. Drawing shown in the standard with protective tines configuration (4 places, 90 degrees apart). The 2 protective tines only "GRO" configuration (2 places, 180 degrees apart) is optional.
4. In the alternate without tines configuration ("NG") the sensor body is exactly 8.0 inches in length. The max displacement for Ion Sensing Element is 0.2" yielding a max insertion depth of 1.7 inches past threads & overall max length of 8.2 inches.
5. 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: 3/4"-1" MNPT Inline / Immersion / Submersible

SIZE	PROJECT	DRAWING NO.	REV
B	IMMERSION	6-ISE Ion Selective Sensor	/

SCALE Not to Scale | MODEL 6XX0 | SHEET 1 OF 1