



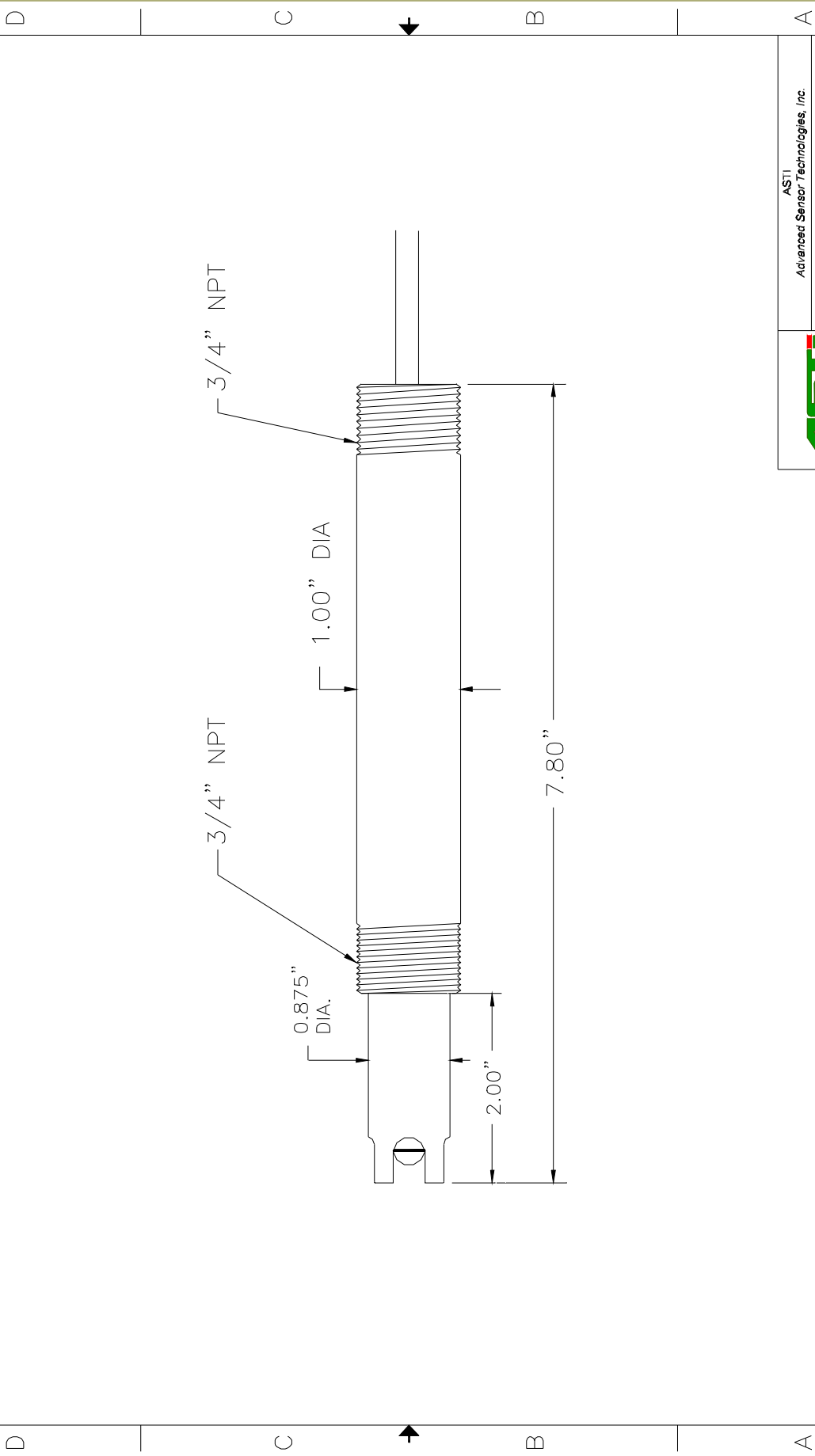
# IOTRON™ SENSORS

## INTEGRATED pH SENSOR SPECIFICATIONS

<u>Part Number:</u>	6442
<u>Configuration:</u>	3/4" – 3/4" MNPT Integrated, Acid/Fluoride Resistant pH Sensor
<u>General Specifications:</u>	
<u>pH Range:</u>	0 to 12 pH (0 to 11 pH with high HF Option)
<u>Temperature Range:</u>	-5 to 105 ° C (-5 to 50 ° C in fluoride solutions)
<u>Pressure Range:</u>	1 to 150 psia (6.9 to 690 kPa absolute)
<u>Body Material:</u>	PEEK (Poly-Ether-Ether-Ketone)
<u>Junction Material:</u>	Kynar (Poly-Vinylidene-Fluoride)
<u>Dimensions:</u>	Drawing <6-5>
<u>Cable:</u>	RG 174/U Coaxial (without preamplifier)
<u>Connector:</u>	BNC (unless otherwise specified)
<u>pH Sensor Specifications:</u>	
<u>Measuring Glass Type:</u>	Hemispherical Green Glass (MUGG), Acid/Fluoride Resistant. Clear Glass (CHIII) with high HF option.
<u>Dimensions:</u>	0.310, (7.8 mm) DIA
<u>Initial Impedance:</u>	Less than 400 M Ohms @ 25 ° C
<u>Alkaline Ion Error:</u>	Less than 0.15 pH in 1.0 M K <sup>+</sup> at pH 14.0
<u>Acidic Error:</u>	Less than 0.01 pH in 1.0 M HCl @ 0.0 pH
<u>Reference System Specifications:</u>	
<u>Type:</u>	Double Junction
<u>Reference Half Cell:</u>	Ag/AgCl, Saturated KCl
<u>Primary Junction:</u>	Porous Ceramic, Saturated KCl in crosslinked polymer
<u>Secondary Junction:</u>	Kynar, Saturated with KCl in crosslinked polymer
<u>Surface Area:</u>	366,000 mil <sup>2</sup> (236 mm <sup>2</sup> )
<u>Special Features:</u>	Body (PEEK) and reference junction materials (Kynar) and crosslinked polymer are extremely resistant to heat, solvents and to most chemicals. Sensor holds an excess of KCl, assuring saturation at all temperatures and extending in situ sensor life. The major advantage of the G-3 Fluoride and Acid Resistant pH Glass is the lack of building fluoride precipitates on its surface while in use, therefore it does not require cleaning and frequent calibration. The composition of the glass also reduces the attack of fluorides more than ten fold relative to general glass compositions. It further resists high concentrations of acids and with its reference electrode system permits pH measurements well into the negative range.
<u>Recommended Applications:</u>	Fluoride containing wastewater, etching solutions, pollution control devices, where long service life or operation at remote locations where (no) low maintenance is required.
<u>Storage and Shelf Life:</u>	At room temperature with closed protector cap, 1 year from date of manufacture.
<u>Standard Hook-Up Options:</u>	No Preamp - BNC Connector + TC lead wires With Preamp – Multiconductor Lead Wires – See Hook Up Schematics

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REV		DESCRIPTION		DATE		APPROVED	
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ASTI  
Advanced Sensor Technologies, Inc.

INTEGRATED ORP SENSOR  
REF. DRAWING <6-5-Pt>

DIMENSION	SIZE	WEB NO.	DWG NO.	REV
2	#<6-5>-Pt		AST16-SPLDWG	1
DRAWN BY: PETE CSISZAR		DATE: MARCH, 2003		SHEET: 1 OF 1

1 2 3 4