



# IOTRON™ SENSORS

## INTEGRATED pH SENSOR SPECIFICATIONS

<u>Part number:</u>	6410A
<u>Configuration:</u>	3/4" – 3/4" MNPT Integrated Ammonium Ion Selective Sensor
<u>General Specifications:</u>	
<u>Concentration Range:</u>	1 to 5 X 10 <sup>-6</sup> Molar, 18,000 to 0.090 ppm
<u>Lowest Limit of Detection:</u>	2X10 <sup>-7</sup> Molar, .004 ppm
<u>pH Range:</u>	2.5 to 9.0 pH
<u>Temperature Range:</u>	5 to 40 °C
<u>Pressure Range:</u>	1 to 10 psig (6.9 to 69 kPag)
<u>Body Material:</u>	CPVC (Chlorinated-Polyvinyl-Chloride)
<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>Ion Sensor Specifications:</u>	
<u>Measuring Membrane:</u>	Selective Ammonium Sensitive Membrane (organic)
<u>Dimensions:</u>	0.310, (7.8 mm) DIA
<u>Initial Impedance:</u>	Less than 100 M Ohms @ 25 °C
<u>Interfering Ions:</u>	
<u>Given in Ratios of Permissible Excess:</u>	Na <sup>+</sup> (5X10 <sup>3</sup> ), K <sup>+</sup> (5), H <sup>+</sup> (1X10 <sup>5</sup> )
<u>Interfering Ion / Measured Ion (in Molarity)</u>	
<u>Reference System Specifications:</u>	
<u>Type:</u>	Double Junction
<u>Reference Half Cell:</u>	Ag/AgCl, Saturated NaCl
<u>Primary Junction:</u>	Porous Ceramic, Saturated NaCl in crosslinked polymer
<u>Secondary Junction:</u>	Porous Kynar, Saturated with NaCl in crosslinked polymer
<u>Surface Area:</u>	366,000 mil <sup>2</sup> , (236 mm <sup>2</sup> )
<u>Special Features:</u>	<p>Crosslinked polymer in the reference system is resistant to heat, solvents and to most chemicals. Sensor holds an excess of NaCl assuring saturation at all temperatures and extending the life of the sensor.</p> <p>The sensor is designed to resist the interactions of a wide range of chemicals and some solvents used in chemical processes.</p> <p>The construction of the sensor permits easy access to the sensing and reference surfaces for cleaning or inspection.</p>
<u>Recommended Applications:</u>	Ammonium ion concentration in aqueous solution from ultrapure water through waste water to industrial process solutions.
<u>Standard Hook-Up Options:</u>	No Preamp - BNC Connector + TC lead wires With Preamp – Multiconductor Lead Wires – See Hook Up Schematics

4 3 2 1

REVISIONS			DATE	APPROVED
ZONE	REV	DESCRIPTION		
2	1			



<b>ASTI</b>		Advanced Sensor Technologies, Inc.	
INTEGRATED pH SENSOR			
REF. DRAWING <6-5>			
SIZE	WEB NO.	DWG NO.	REV
2	#<6-5>	AST16-5.DWG	1
DRAWN BY: PETE CSISZAR		SCALE: NONE	SHEET 1 OF 1

1 2 3 4