



# IOTRON™ SENSORS

## INTEGRATED pH SENSOR SPECIFICATIONS

<u>Part number:</u>	6140A
<u>Configuration:</u>	3/4" – 3/4" MNPT Integrated Iodide Ion Selective Sensor
<u>General Specifications:</u>	
<u>Concentration Range:</u>	1 to $10^{-8}$ Molar, 127,000 to 0.006 ppm
<u>Lowest Limit of Detection</u>	$10^{-9}$ Molar, .001 ppm
<u>pH Range:</u>	1 to 13
<u>Temperature Range:</u>	5 to 50 °C
<u>Pressure Range:</u>	1 to 20 psig (6.9 to 138 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 Iodide Sensitive Membrane (solid state)
<u>Dimensions:</u>	0.310, (7.8 mm) DIA
<u>Initial Impedance:</u>	Less than 20 M Ohms @ 25 °C
<u>Interfering Ions:</u>	
<u>Given in Ratios of Permissible Excess:</u>	$\text{OH}^- (10^8), \text{Cl}^- (10^6), \text{Br}^- (5 \times 10^3), \text{S}^{2-} (\text{Trace})$
<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 KCl
<u>Primary Junction:</u>	Porous Ceramic, Saturated KCl in crosslinked polymer
<u>Secondary Junction:</u>	Porous Kynar, Saturated with $\text{KNO}_3$ in crosslinked polymer
<u>Surface Area:</u>	366,000 $\text{mil}^2$ , (236 $\text{mm}^2$ )
<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 <math>\text{KNO}_3</math>, assuring saturation at all temperatures and extending the life of the sensor.</p> <p>The ion sensitive part of the sensor is designed to most acids, alkali and organic 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>	Iodide ion concentration in aqueous solution from wastewater industrial process solutions
<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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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
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