



# IOTRON™ SENSORS

## INTEGRATED pH SENSOR SPECIFICATIONS

<u>Part number:</u>	6490A
<u>Configuration:</u>	3/4" – 3/4" MNPT Integrated Lithium Ion Selective Sensor
<u>General Specifications:</u>	
Concentration Range:	0.1 - $6 \times 10^{-6}$ Molar, 700 - 0.042 ppm
Lowest Limit of Detection:	$1 \times 10^{-6}$ Molar, 0.007 ppm
pH Range:	2 to 12
Temperature Range:	5 to 40 ° C
Pressure Range:	1 to 10 psig (6.9 to 69 kPag)
Body Material:	CPVC (Chlorinated-Polyvinyl-Chloride)
Junction Material:	Kynar (Poly-Vinylidene-Fluoride)
Dimensions:	Drawing <6-5>
Cable:	RG 174/U Coaxial (without preamplifier)
Connector:	BNC (unless otherwise specified)
<u>Ion Sensor Specifications:</u>	
Measuring Membrane:	Selective Lithium Sensitive Membrane (organic)
Dimensions:	0.310, (7.8 mm) DIA
Initial Impedance:	Less than 100 M Ohms @ 25 ° C
Interfering Ions:	
Given in Ratios of Permissible Excess:	$\text{Na}^+$ (250), $\text{K}^+$ (200), $\text{Mg}^{+2}$ ( $2 \times 10^4$ ), $\text{NH}_4^+$ ( $1 \times 10^3$ )
Interfering Ion / Measured Ion (in Molarity)	
<u>Reference System Specifications:</u>	
Type:	Double Junction
Reference Half Cell:	Ag/AgCl, Saturated KCl
Primary Junction:	Porous Ceramic, Saturated KCL in crosslinked polymer
Secondary Junction:	Porous Kynar, Saturated with Lithium specific salt in crosslinked polymer
Surface Area:	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 lithium specific salt assuring saturation at all temperatures and extending the life of the sensor.</p> <p>The sensor is designed to resist the interactions of sodium, ammonium, potassium, magnesium and calcium ions as well as most 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>	Lithium ion concentration in aqueous solution from ultrapure water through waste water to 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

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