



IOTRON™ SENSORS

INTEGRATED pH SENSOR SPECIFICATIONS

<u>Part number:</u>	6440A
<u>Configuration:</u>	3/4" – 3/4" MNPT Integrated Calcium Ion Selective Sensor
<u>General Specifications:</u>	
<u>Concentration Range:</u>	1 to 5 X 10 ⁻⁶ Molar, 40,000 to 0.200 ppm
<u>Lowest Limit of Detection:</u>	5 X 10 ⁻⁷ Molar, 20 ppb
<u>pH Range:</u>	2.5 to 11
<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 Calcium 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: (given in permissible ratios of excess)</u>	Na ⁺ (10 ²), K ⁺ (167), Mg ⁺² (5X10 ³)
<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 KCl in crosslinked polymer
<u>Surface Area:</u>	366,000 mil ² , (236 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 KCl assuring saturation at all temperatures and extending the life of the sensor.</p> <p>The sensor is designed to resist the interactions of sodium and potassium ions and 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>	Calcium 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

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
2	1			



ASTI		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