IOTRON™ SENSORS
INTEGRATED pH SENSOR SPECIFICATIONS

Part Number:	PNS 6431
Configuration:	2 1/2" O.D. Integrated Sanitary, Acid/Fluoride Resistant pH Sensor
General Specifications:	
pH Range:	0 to 12 pH (0 to 11 pH, with high HF Resistant Option).
Temperature Range:	5 to 70 °C (-5 to 50 °C in fluoride solutions)
Pressure Range:	1 to 100 psia (6.9 to 690 kPa absolute)
Body Material:	Ultem (Poly-Ether-Imide)
Junction Material:	Kynar (Poly-Vinylidene-Fluordie)
Dimensions:	Drawing <6-7>
Cable:	RG 174/U Coaxial (without preamplifier)
Connector:	BNC (unless otherwise specified)
pH Sensor Specifications:	
Measuring Glass Type:	Hemispherical Green Glass (MUGG), Acid/Fluoride Resistant. Clear Glass (CH III) with high HF option.
Dimensions:	0.310, (7.8 mm) DIA
Initial Impedance:	MUGG - Less than 800 M Ohms @ 25 °C. CH III – Less than 2,000 M Ohms with the high HF option.
Sodium Ion Error:	Less than 0.15 pH in 1.0 M Na^+ Concentration at pH 14.00
Acidic Error:	Less than 0.05 pH in 1.0 M HCl @ 0.00 pH
Reference System Specifications:	
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 KCl in crosslinked polymer
Surface Area:	366,000 mil^2 (236 mm^2)
Special Features:	Crosslinked polymer is 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 MUGG Fluoride and CH III 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.
Recommended Applications:	Wastewater treatment, chemical processes, pollution control, measurements where long service life or operation at remote locations where (no) low maintenance is required.
Storage and Shelf Life:	At room temperature with closed protector cap, 1 year from date of manufacture.
Standard Hook-Up Options:	No Preamp - BNC Connector + TC lead wires With Preamp – Multiconductor Lead Wires – See Hook Up Schematics

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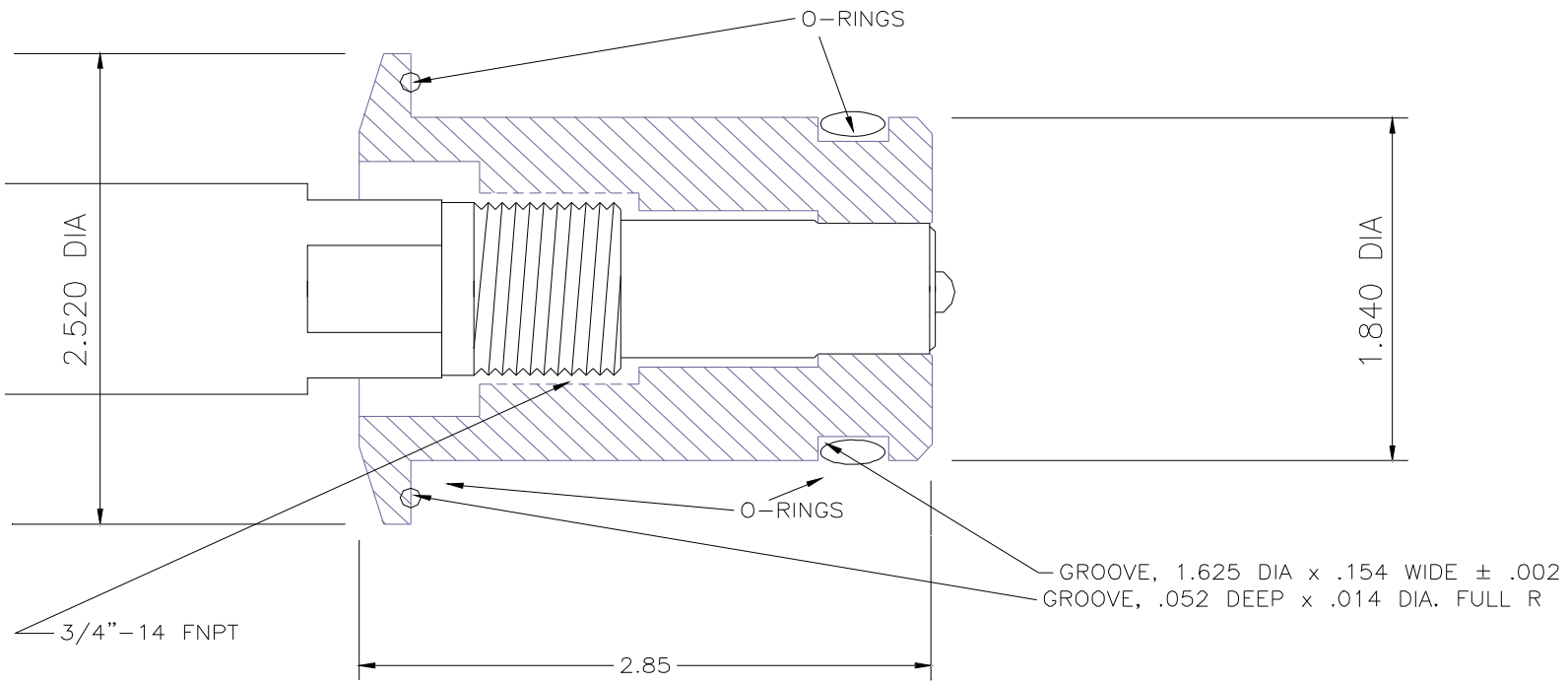
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
2	1			



ASTI	ASTI *Advanced Sensor Technologies, Inc.*	
	SANITARY pH SENSOR REF. DRAWING <6-7>	
DIMENSION	SIZE 2 / FSCM NO. <6-7> / DWG NO. AST16-7.DWG	REV 1
DRAWN BY: PETE CSISZAR	SCALE NONE / DATE: MARCH, 2003	SHEET 1 OF 1