



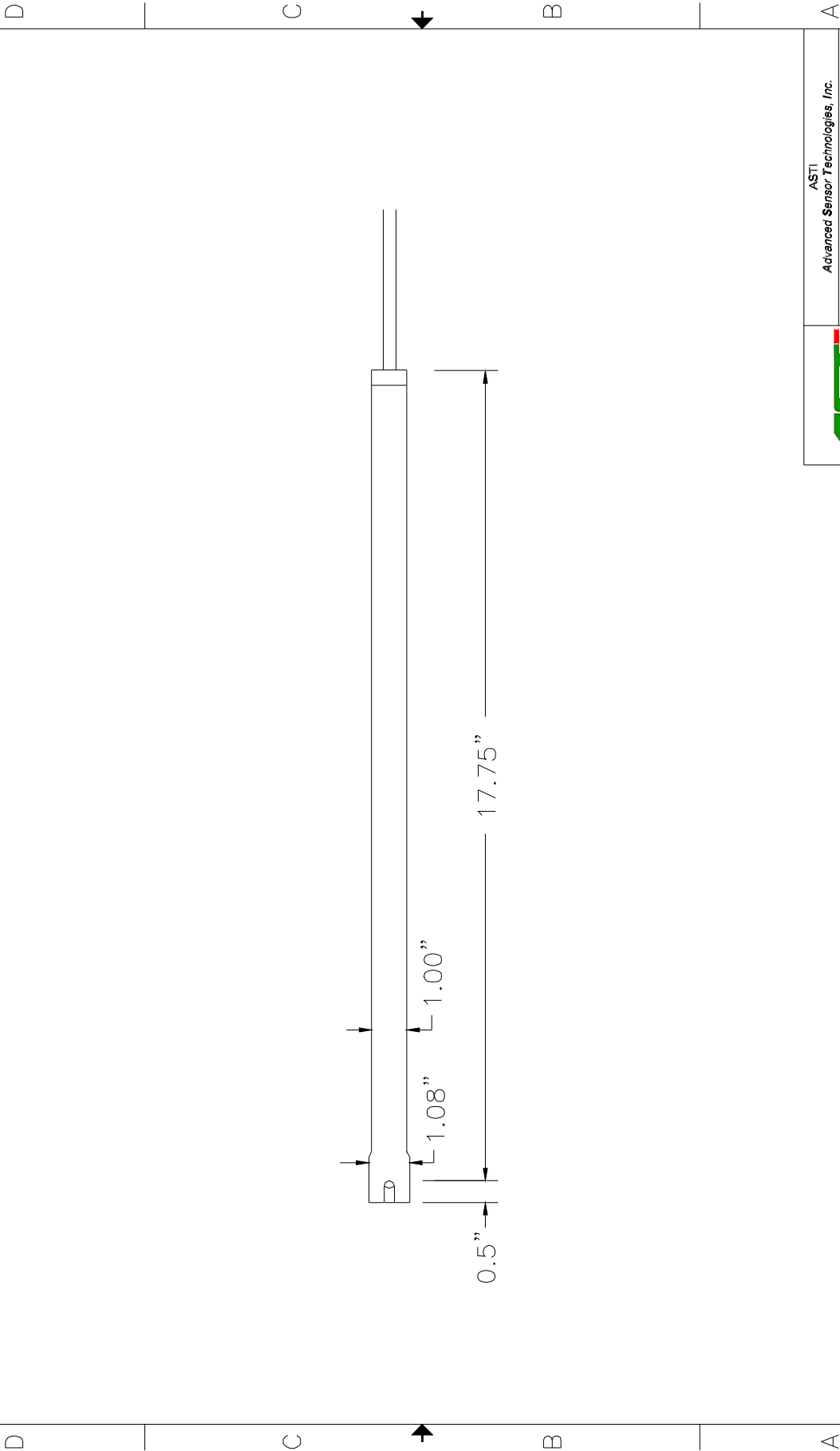
# IOTRON™ SENSORS

## INTEGRATED pH SENSOR SPECIFICATIONS

<u>Part Number:</u>	9012
<u>Configuration:</u>	1.0" O.D. Valve Retractable, General Purpose pH Sensor
<u>General Specifications:</u>	
<u>pH Range:</u>	0 to 14 pH (2 to 12 pH with low Impedence Option).
<u>Temperature Range:</u>	5 to 70
<u>Pressure Range:</u>	1 to 60 psia (6.9 to 690 kPa absolute)
<u>Body Material:</u>	CPVC (Chlorinated-Polyvinyl-Chloride)
<u>Junction Material:</u>	Kynar (Poly-Vinylidene-Fluoride)
<u>Dimensions:</u>	Drawing <9-1>
<u>Cable:</u>	RG 174/U Coaxial (without preamplifier)
<u>Connector:</u>	BNC (unless otherwise specified)
<u>pH Sensor Specifications:</u>	
<u>Measuring Glass Type:</u>	Hemispherical, Green Glass (MUGG). Clear Glass (GP) with low Impedence Option.
<u>Dimensions:</u>	0.310, (7.8 mm) DIA
<u>Initial Impedance:</u>	Green Glass (MUGG) less than 800 M Ohms @ 25 °C. Clear Glass (GP) Less than 200 M Ohms for Low Impedence option.
<u>Sodium Ion Error:</u>	Less than 0.15 pH in 1.0 M Na <sup>+</sup> Concentration at pH 14.00
<u>Acidic Error:</u>	Less than 0.05 pH in 1.0 M HCl @ 0.00 pH
<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 <sup>2</sup> (236 mm <sup>2</sup> )
<u>Special Features:</u>	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 reference system holds a generous supply of aqueous saturated KCl, eliminating effects of intruding contaminants and permits the sensor to be left in dry condition for extended periods of time.
<u>Recommended Applications:</u>	Wastewater treatment, chemical processes, pollution control, measurements where long service life or operation at remote locations where (no) low maintenance is required.
<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				
ZONE	REV	DESCRIPTION	DATE	APPROVED
2	1			



**ASTI**  
 Advanced Sensor Technologies, Inc.  
 VALVE RETRACTABLE  
 pH SENSOR DWG <9-1>

SIZE	FSON NO.	DWG NO.	REV
2	#<9-1>	AST19-1.DWG	1

DRAWN BY: PETE CSISZAR  
 SCALE: NONE  
 DATE: MARCH, 2003  
 SHEET 1 OF 1

4 3 2 1