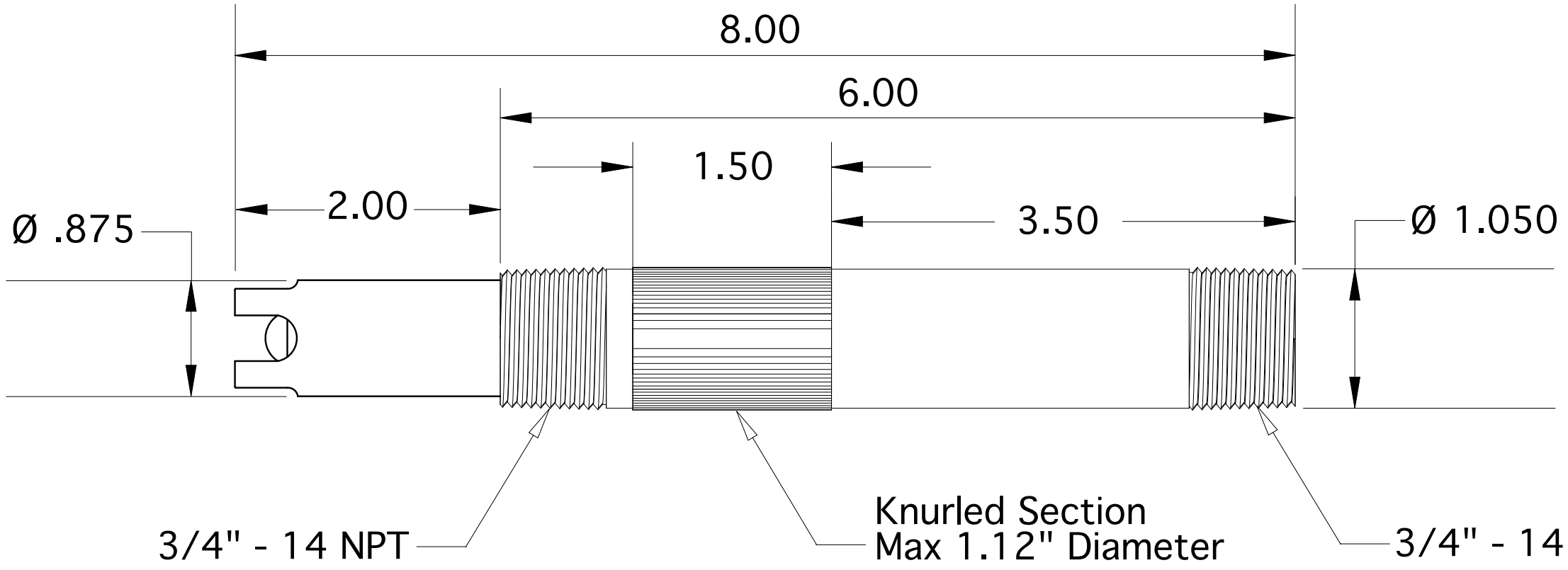
Sensor Part Number & Short Description:	**6442** – Acid Fluoride & HF Resistant pH Sensor - Inline, Immersion & Submersible Installations; Front ¾" MNPT for Inline & Rear ¾" MNPT for Immersion / Submersion
Configuration Type:	*Front threads interface ¾" FNPT of tee or process tank for Inline Use or Rear threads interface ¾" FNPT of insertion tube for immersion or waterproofing seal for submersion*
General Sensor Specifications:	
Operating Temperature Range:	-5 to 105°C (Recommended for -5 to +70 °C in strong HF & fluoride at low pH media)
Operating Pressure Range:	1 to 100 psig (6.9 to 690 kPa) with ¾" MNPT Front Threads for Inline Installations
Sensor Body Material:	KetaSpire® KT-880 NT (Poly-Ether-Ether-Ketone, PEEK)
Junction Support Matrix Material:	KYNAR® (Poly-Vinylidene-Fluoride, PVDF) Standard or Polypropylene (PP) - **6442PP**
External Dimensions:	See Drawing 6-5
pH Measurement Specifications:	
Measurement pH Range:	0 to 14 pH (0 to 11 pH with High HF Resistant Option, Alpha Prefix "HF")
Measuring Glass Type:	Hemispherical Glass
pH Glass Dimensions:	0.315" (8.0 mm) DIA, 0.354" (9.0 mm) DIA with High HF Option (Alpha Prefix "HF")
Initial Impedance:	< 800 MΩ @ 25 °C, < 1,500 MΩ @ 25 °C with High HF Option (Alpha Prefix "HF")
Sodium Ion Error:	Less than 0.15 pH in sodium (Na^+) solutions at pH 14.00 (without "HF" option invoked)
Acidic Error:	Less than 0.05 pH in hydrochloric acid (HCl) solutions at 0.00 pH (for standard version)
Reference System Specifications:	
Type:	Double Junction Standard (Triple Junction Optional, Alpha Prefix "TJ")
Reference Half Cell:	Ag/AgCl, Saturated KCl
Primary Junction:	Porous Ceramic, Sat. KCl in crosslinked polymer, Interfaced to Secondary Junction
Secondary Junction:	Solid-State Non-Porous Cross-Linked Polymer embedded in Kynar/Polyproylene Matrix holds excess KCl assuring saturation at all temps for stability & long sensor service life
Supported Order Options with Alpha Prefix Order Code Designation: ***Inquire to factory for specials***	Ammonia gas resistant ("A"), Chlorine gas resistant ("C"), Organic Media Resistant ("L"), Solvent Resistant ("TS"), 3-Wire TC ("M"), ACCU-TEMP Fast TC ("X"), Reduce to 2 ea Protective Tines ("GRO"), No Protective Tines ("NG"), Shielded Preamp Cable ("BL")
Example Recommended Applications:	Acid fluoride etching solutions or fluoride wastewater treatment systems where low pH conditions may exist or strong acid cleaning is required to remove fouling from sensor.
Storage and Shelf Life:	One (1) year from date of dispatch from factory when stored at indoor ambient room temperature with proper orientation & protector cap. Extreme Dehydration Resistant Option (Alpha Prefix "E") sensors are suitable for cold storage down to -35 °C (-31 °F).
Available Configurations & Options:	
Integrated Components:	- Temperature Compensation Element (compatible type must be specified) - Solution Ground Liquid Earth, 316SS (alpha prefix "Y"), or Platinum (alpha prefix "Pt") - Analog Conventional or Differential Preamplifier (Contact factory for available options) - Smart digital sensor board for use with 3TX-HiQ-pH Intelligent pH & ORP transmitters
Analog Sensors without integral preamplifier:	Terminated with Male BNC connector (-MBNC) or Tinned Lead Wires (-TL)
Analog Sensors with integral preamplifier:	Terminated with Tinned Lead Wires (-TL) or Quick Disconnect NEMA 6P Snap (-Q7M)
Analog Dual pH & ORP All-in-one Sensors *without integral preamplifier style only:*	Terminated with tinned lead wires (-TL), Alpha Prefix "PtD", 2 each reference half-cells allow for simultaneous use on two completely separate input channels or transmitters
Digital Smart Sensors:	Terminated standard with quick disconnect IP67/NEMA 6P rated waterproof & corrosion resistant snap HiQ4M connector. For 3TX-HiQ-pH Intelligent pH & ORP transmitters or HiQDT style with RS-485 MODBUS RTU to interface with any suitable PLC or SCADA (Minimum Order Quantity may apply for HiQDT style version, contact factory for details)

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



NOTES

1. All dimensions are in inches, unless otherwise indicated with tolerances as detailed below
2. Sensor body material of construction is CPVC (6X13/6X12), RADEL (6X32), PEEK (6X42), RYTON (6X53/6X54)
3. Drawing shown in the standard with protective tines configuration (4 places, 90 degrees apart).
   The 2 protective tines only "GRO" configuration (2 places, 180 degrees apart) is optional.
4. In the alternate without tines configuration ("NG") the sensor body is exactly 7.5 inches in length.
   The max displacement for hemispherical pH glass is
   0.3" yielding a max insertion depth of 1.8 inches
   past threads & overall max length of 7.8 inches.
5. Do not use any sensor beyond the factory defined
   maximum temperature or pressure rating.

TOLERANCES	
1 Place: ± .1	3 Places: ± .005
2 Places: ± .01	4 Places: ± .0005
Angular: ± 0.25°	

DRAWN BY: RH
CHECKED BY: TADP
APPROVED BY: MJP

Advanced Sensor Technologies U.S.A.
Website: http://www.astisensor.com

TITLE: 3/4"-3/4" MNPT Inline / Immersion / Submersible

SIZE	PROJECT	DRAWING NO.	REV
B	**IMMERSION**	6-5 pH SENSORS	/

SCALE: Not to Scale | MODEL: 6X32,6X42,6X53,6X54 | SHEET 1 OF 1