

## Specifications – pH Sensor for Acid Etching

General Specifications	
Description	pH Sensor for Acid Etching
Part Number	TT-HF-pH-2109
pH Range	0 to 14 pH
Temperature Range	-5 to 105°C
Pressure	6.9 to 690 kPa (1 to 100 psig)
Body Type	RYTON (Poly-Phenylene-Sulfone) with ¾" Front End – 1" Back End MNPT
Junction Material	KYNAR (Poly-Vinylidene-Fluoride)
Dimensions	216mm Length, Maximum Diameter 33.3mm
Cable Length	6m
Temperature Compensation	Pt1000
Preamplifier	Not Fitted
Waterproofing	Immersible, Submersible if threaded on sealed immersion rod with sufficient sealing tape
Connection	Hard Wired Tinned Leads for Sensor & TC
Special Features	Acid/Fluoride, Slurry, Sulphide, and Organic Resistant, High HF Resistant
pH Sensor Specifications	
Measuring Glass Type	Hemispherical, Green Glass (MUGG)
Glass Dimensions	8.0mm (0.315") Diameter
Initial Impedance	< 800 M Ohms @ 25°C
Sodium Ion Error	< 0.15 pH in Na <sup>+</sup> solutions at pH 14.00
Acidic Errors	< 0.05 pH in HCl solutions at 0.00 pH
Reference System Specifications	
Type	Double Junction
Reference Half Cell	Ag/AgCl, Saturated KCl
Primary Junction	Porous Ceramic, Saturated KCl in Cross-linked polymer, interfaced to Secondary Junction
Secondary Junction	Solid-State Non-Porous Cross-Linked Polymer embedded in Kynar Support Matrix holds excess KCl assuring saturation at all temps for stability & long sensor service life.
Application Specifications	
Recommended Applications	Specifically designed for Acid Etching. Any process media containing free sulfide species such as hydrogen sulfide gas (H <sub>2</sub> S), hydrogen sulfide (HS <sup>-</sup> ) or sulfide ions (S <sup>2-</sup> ). Any measurement where aggressive chemical cleaning is needed to remove fouling or low-maintenance operation is required with minimal cleaning and re-calibration.
Analyser / Interface	All Turtle Tough pH Analysers
Storage	Item should be kept at room temperature with closed protector cap, filled with storage solution in an upright position. Shelf life warranted for 12 months from the date of purchase.
Warranty	12 Month Conditional Warranty Please see <a href="http://www.turtletoough.com.au/support/warranty-returns">www.turtletoough.com.au/support/warranty-returns</a>

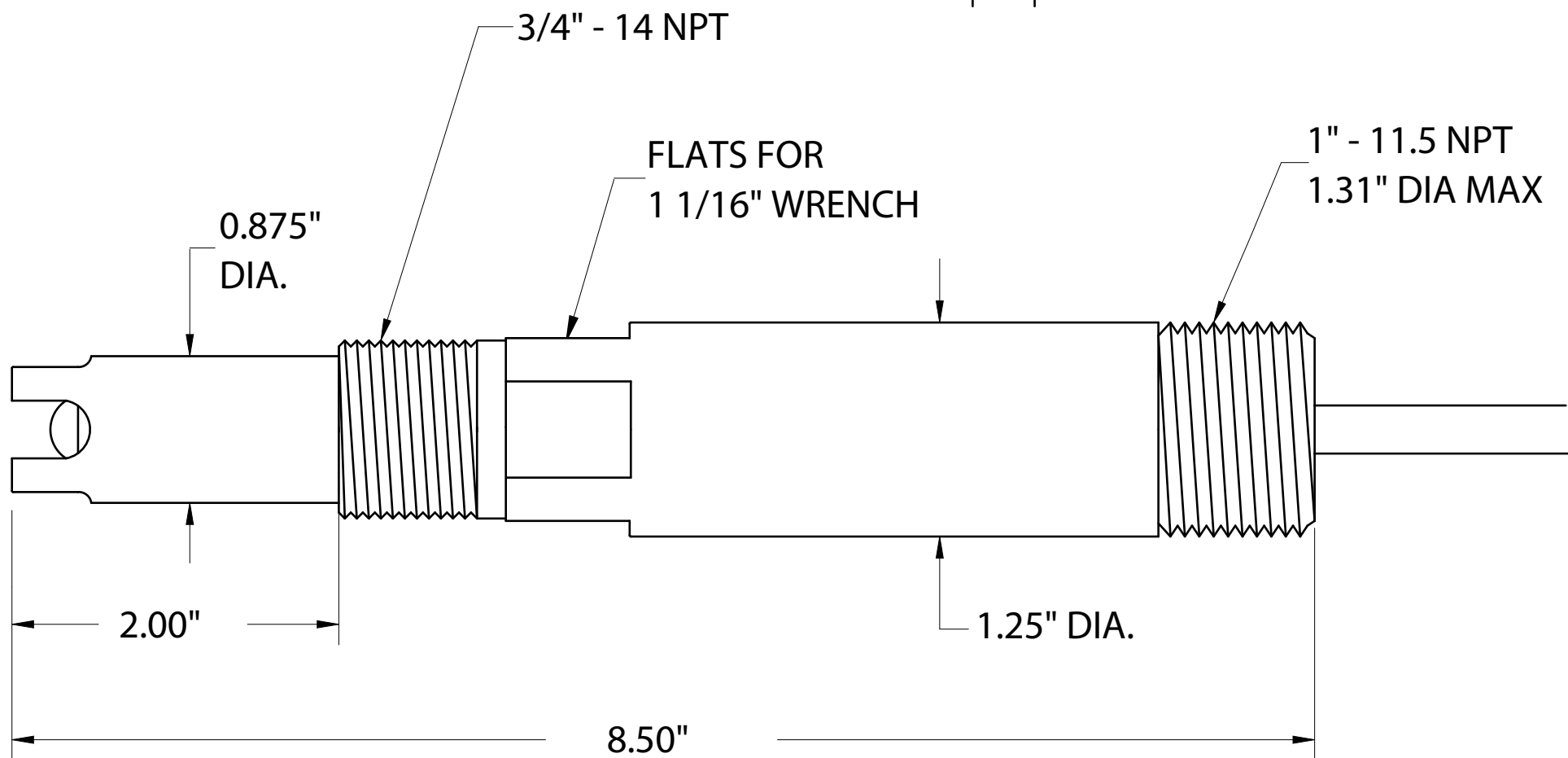
1

2

3

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 RADEL, PEEK or RYTON.
3. Drawing shown in the standard with protective tines configuration (4 places, 90 degrees apart).  
The 2 protective tines only configuration (2 places, 180 degrees apart) is optional.
4. In the alternate without tines configuration, the sensor body is exactly 8.0 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 8.3 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

		<b>TURTLE TOUGH</b>		Turtle Tough Sensors www.turtletough.com.au	
TITLE <b>3/4"-1" MNPT Inline / Immersion / Submersible</b>					
SIZE <b>B</b>	PROJECT <b>IMMERSION</b>	DRAWING NO. <b>6-1 pH SENSORS</b>		REV <b>/</b>	
SCALE Not to Scale	MODEL 6X31,6X41,6X51,6X52	SHEET 1	OF 1		

1

2

3