

## Specifications – pH Sensor for Nickel

General Specifications	
<b>Description</b>	pH Sensor for Nickel
<b>Part Number</b>	TT-Ni-pH-2103
<b>pH Range</b>	0 to 14 pH
<b>Temperature Range</b>	-5 to 105°C (optional high temperature up at 135°C)
<b>Pressure</b>	6.9 to 1035 kPa absolute (1 to 150 psig)
<b>Body Type</b>	RADEL (Poly-Phenyl-Sulfone) with ¾" Front End – 1" Back End MNPT
<b>Junction Material</b>	KYNAR (Poly-Vinylidene-Fluoride)
<b>Dimensions</b>	216mm Length, Maximum Diameter 33.3mm
<b>Cable Length</b>	6m
<b>Temperature Compensation</b>	Pt1000
<b>Preamplifier</b>	Not Fitted
<b>Waterproofing</b>	Immersible, Submersible if threaded on sealed immersion rod with sufficient sealing tape
<b>Connection</b>	Hard Wired Tinned Leads for Sensor & TC
<b>Special Features</b>	Acid/Fluoride, Slurry, Sulphide, Organic, and Solvent Resistant, High Temperature Resistant, Accu-Temp Pt1000, Teflon silicon sealant
pH Sensor Specifications	
<b>Measuring Glass Type</b>	Hemispherical, Green Glass (MUGG)
<b>Glass Dimensions</b>	8.0mm (0.315") Diameter
<b>Initial Impedance</b>	< 800 M Ohms @ 25°C
<b>Sodium Ion Error</b>	< 0.15 pH in Na <sup>+</sup> solutions at pH 14.00
<b>Acidic Errors</b>	< 0.05 pH in HCl solutions at 0.00 pH
Reference System Specifications	
<b>Type</b>	Triple Junction
<b>Reference Half Cell</b>	Ag/AgCl, Saturated KCl
<b>Primary &amp; Secondary Junction</b>	Porous Ceramic, Saturated KCl in Cross-linked polymer, interfaced to Tertiary Junction
<b>Tertiary Junction</b>	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	
<b>Recommended Applications</b>	Specifically designed for the Nickel industry. 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.
<b>Analyser / Interface</b>	All Turtle Tough pH Analysers
<b>Storage</b>	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.
<b>Warranty</b>	12 Month Conditional Warranty Please see <a href="http://www.turtletough.com.au/support/warranty-returns">www.turtletough.com.au/support/warranty-returns</a>

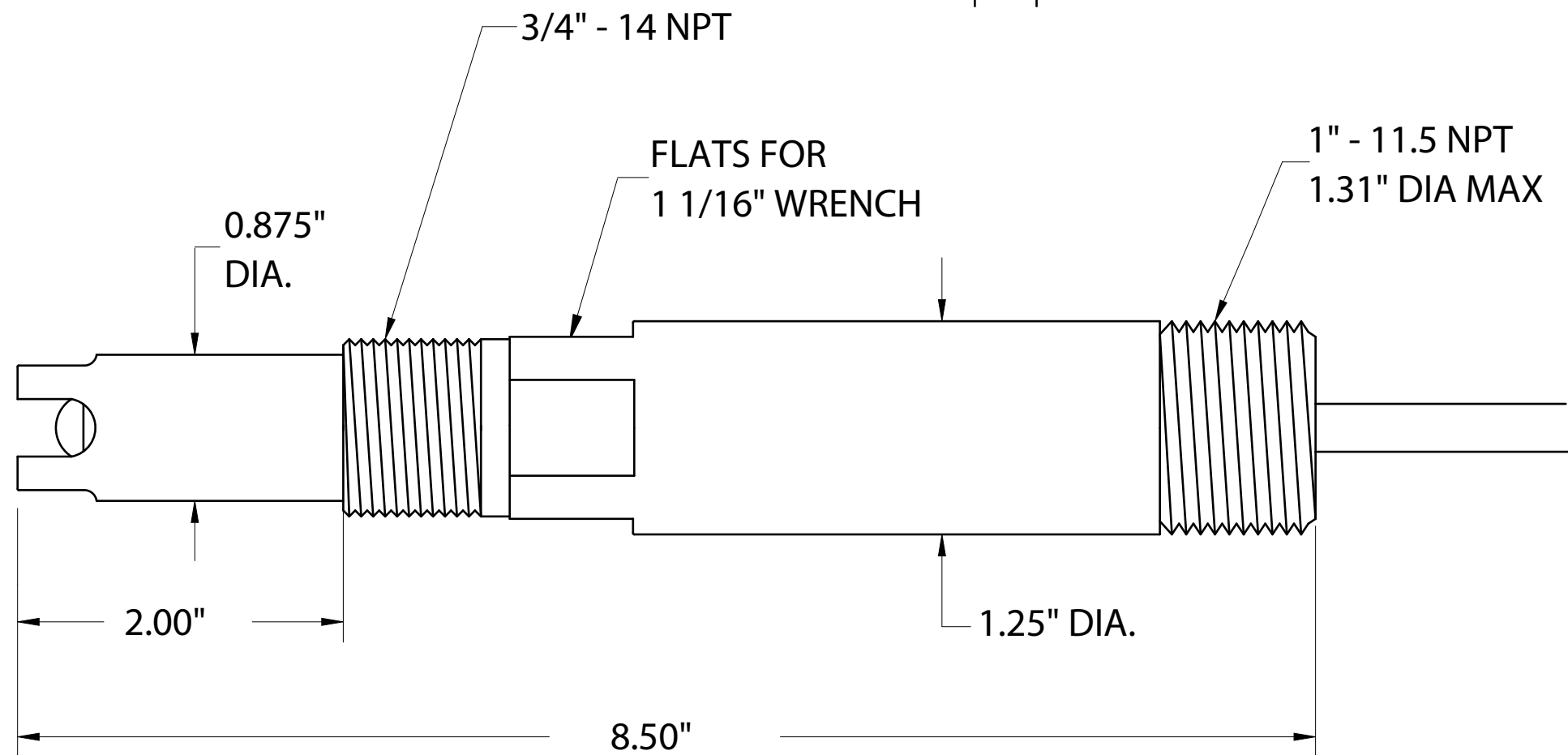
1

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

		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