



# IOTRON™ SENSORS

## INTEGRATED pH SENSOR SPECIFICATIONS

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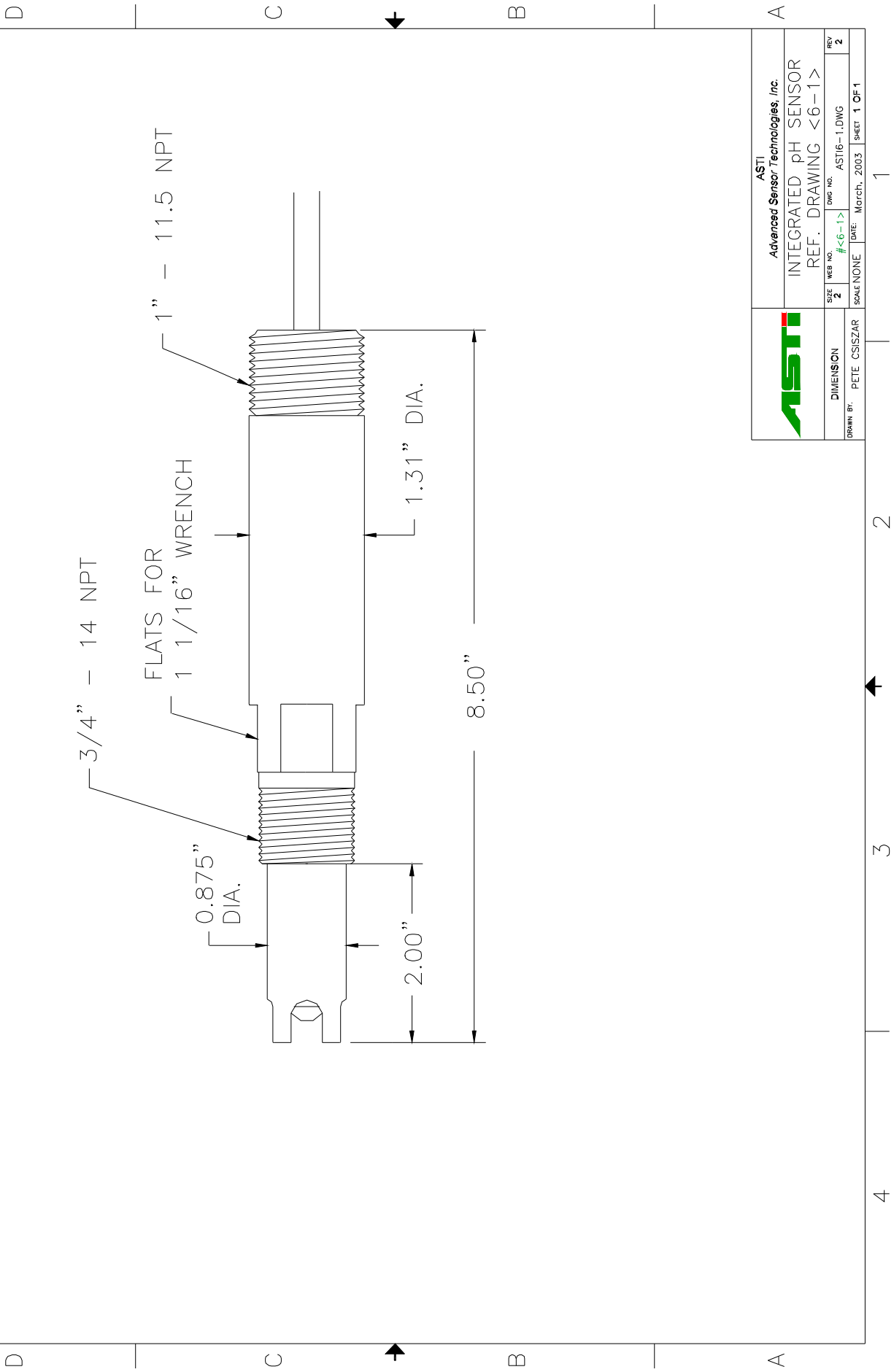
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| <u>Part Number:</u>                     | 6931   |
| <u>Configuration:</u>                   | 3/4" ±1" MNPT Integrated, Saturated Sodium Resistant pH Sensor   |
| <u>General Specifications:</u>          |  |
| <u>pH Range:</u>                        | 0 to 11 pH (0 to 14 pH, In the absence of Sodium Ions.)  |
| <u>Temperature Range:</u>               | -5 to 105 ° C  |
| <u>Pressure Range:</u>                  | 1 to 100 psia (6.9 to 690 kPa absolute)  |
| <u>Body Material:</u>                   | Ultem (Poly-Ether-Imide)   |
| <u>Junction Material:</u>               | Kynar (Poly-Vinylidene-Fluoride)   |
| <u>Dimensions:</u>                      | Drawing <6-1>  |
| <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, Clear Glass (CH III), Sodium Resistant  |
| <u>Dimensions:</u>                      | 0.310, (7.8 mm) DIA  |
| <u>Initial Impedance:</u>               | Less than 2000 M Ohms @ 25 ° C   |
| <u>Alkaline Ion Error:</u>              | Less than 0.15 pH in 1.0 M K <sup>+</sup> at pH 14.0   |
| <u>Acidic Error:</u>                    | Less than 0.05 pH in 1.0 M HCl @ 0.0 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 (CH III), Sodium Resistant pH Glass is though the major contributor to the performance of this very special sensor. Due to the pH glass composition the exposure of the sensor to saturated sodium solutions, even at elevated temperature and/or for a prolonged time, does not deteriorate either the pH response or the stability of the electrode calibration. |
| <u>Recommended Applications:</u>        | Sodium brines, food, feed water, seawater, biological solutions, saline solutions, dialysis, sodium containing waste water, etching solutions, pollution control devices, 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<br>With Preamp ±Multiconductor Lead Wires ±See Hook Up Schematics  |

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| ZONE |   | REV |  | DESCRIPTION |  | DATE |  | APPROVED |  |
|------|---|-----|--|-------------|--|------|--|----------|--|
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|---|---------|----------------------|--------------|
| <b>ASTI</b><br>Advanced Sensor Technologies, Inc. |         | INTEGRATED pH SENSOR |              |
| DIMENSION   |         | REF. DRAWING <6-1>   |              |
| SIZE  | WEB NO. | DWG NO.              | REV          |
| 2   | #<6-1>  | ASTI6-1.DWG          | 2            |
| SCALE NONE  |         | DATE: March, 2003    | SHEET 1 OF 1 |
| DRAWN BY: PETE CSISZAR                            |         |                      |              |