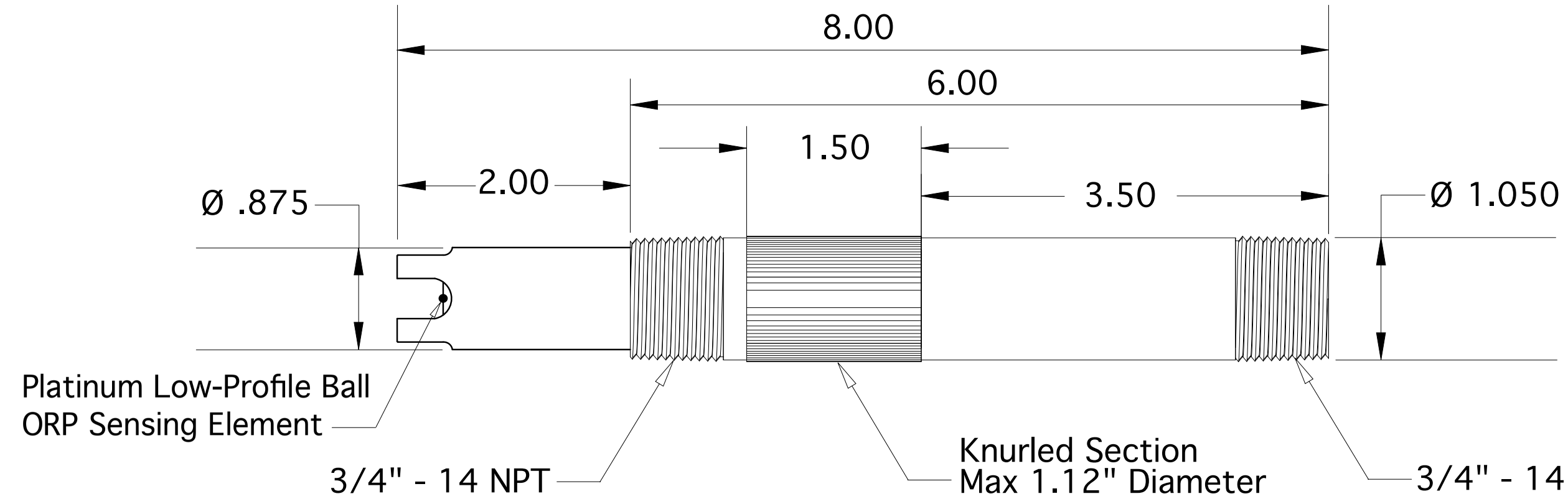
IOTRON™ SENSORS
INTEGRATED INDUSTRIAL ORP SENSOR SPECIFICATIONS

Sensor Part Number & Short Description:	**6832** – Oxidation Reduction Potential (**ORP**) Sensor for Inline Use with ¾" MNPT Front Threads and Immersion/Submersion Type Installations with ¾" MNPT Rear Threads **6832 is now a special order model with minimum order quantities (MOQ) required Please see models 5831 and/or 6831 as alternates without any MOQ requirement**
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 (-35 to 150°C with Extreme Dehydration Resistant "E" Option – PVDF Only)
Operating Pressure Range:	1 to 100 psig (6.9 to 690 kPa) with ¾" MNPT Front Threads for Inline Installations
Sensor Body Material:	RADEL® R-5000 NT (Poly-Phenyl-Sulfone, PPSU)
Junction Support Matrix Material:	KYNAR® (Poly-Vinylidene-Fluoride, PVDF) Standard or Polypropylene (PP) - **6832PP**
External Dimensions:	See Drawing 6-5-Pt
ORP Measurement Specifications:	
Measurement mV Range:	-2,000 to +2,000 mV absolute
Measuring Glass Type:	Platinum Ball in Low Profile Configuration; Suitable for Slurries & High Pressure/Velocity
pH Glass Dimensions:	0.197" (5.0 mm) DIA
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:	Any process media where the redox (ORP) potential is monitored or controlled. Can be combined with other sensor options available for pH sensors such as high temperature resistant, slurry & viscous material resistant, acid fluoride & HF resistant, pulp and paper resistant, sulfide resistant, dissolved gas and organic solvent resistant or saturated brine resistant. Any measurement where aggressive chemical cleaning is needed to remove fouling or low-maintenance operation is required with minimal cleaning and re-calibration.
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)
Digital Smart Sensors:	Terminated with IP67/NEMA 6P rated waterproof & corrosion resistant snap 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 Quantities may apply)

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 ORP sensing element is
   0.1" yielding a max insertion depth of 1.6 inches
   past threads & overall max length of 7.6 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-Pt Low-Profile ORP	/

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