



IOTRON™ SENSORS

INTEGRATED INDUSTRIAL pH SENSOR SPECIFICATIONS

Sensor Part Number & Short Description:

6932 – Saturated Sodium (Brine) Resistant pH Sensor for Inline Use with ¼” MNPT Front Threads & Immersion/Submersion Installations with ¼” MNPT Rear Threads
6932 is now a special order model with minimum order quantities (MOQ) required
Please see models 5931 and/or 6931 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 ¼” 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) - **6932PP**
External Dimensions: See Drawing 6-5

pH Measurement Specifications:

Measurement pH Range: 0 to 11 pH
Measuring Glass Type: Hemispherical, Clear Glass
pH Glass Dimensions: 0.354” (9.0 mm) DIA
Initial Impedance: < 1,500 MΩ @ 25 °C
Sodium Ion Error: Less than 0.05 pH in saturated sodium (Na⁺) brine solutions at pH 11.00
Acidic Error: Less than 0.05 pH in hydrochloric acid (HCl) solutions at 0.00 pH

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/Polypropylene Matrix holds excess KCl assuring saturation at all temps for stability & long sensor service life

Supported Order Options with

Alpha Prefix Order Code Designation:

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”)

Inquire to factory for specials

Example Recommended Applications:

Any process application where high levels of brine may be present. **Saturated sodium resistant pH glass ensures accurate readings, stability and longevity in brines.**
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)

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 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)

