Twist Lock pH & ORP Sensors

Twist Lock Quick Disconnect Bayonet Style pH Sensors & ORP Sensors for Inline Installations Requiring Easy & Fast Insertion & Removal from Process

8X31 RADEL series pH sensor with “GR” 4 each protective tines installed into a 1″MNPT KYNAR twist lock receptacle

8X51 RYTON series pH sensor with "GR" 4 each protective tines & Waterproofing Sealing Option "C" for Submersible Installation

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ASTI offers unique solutions for process measurement problems. Features and options are itemized below:

- Leading novel and proprietary solid-state industrial pH sensor & ORP sensor design and technology combined with built-to-order extensively configurable manufacturing offer the best possible service lifetime at the most cost effective pricepoint. Review the **Competitive Advantages of Design & Technology for IOTRON™ & ZEUS™ Industrial pH & ORP Sensors webpage** for details.
- Best reference service lifetime in process industry through proprietary, novel, non-porous, cross-linked, conductive polymer technology; Available in double junction (standard) or triple junction (optional "TJ") configurations
- Rugged industrial grade sensors can operate in a temperature range from -35 to 150 degrees Celsius at pressures up to 100 psig for quick-disconnect inline twist lock bayonet lock style installations
- Base models for general purpose, high temperature resistant, ultra-high temperature resistant, slurry & viscous material resistant, acid/fluoride & HF resistant, pulp & paper resistant, aggressive dissolved gas & volatile organic solvent resistant, Oxidation Reduction Potential (ORP) and saturated sodium (brine) resistant.
- Selected optional features include Ammonia gas resistant ("A"), Chlorine gas

resistant (“C”), Wide Range -0.5 to +14.5 pH Media Resistant (“V”), Organic Media Resistant (“L”), Solvent Resistant (“TS”), 3-Wire TC (“M”), ACCU-TEMP Fast TC (“X”), Add Protective Tines 4 ea (“GR”), Add Protective Tines 2 ea (“GRO”), Shielded Preamplifier Cable (“BL”).

- Available with most any integral temperature compensation element (Pt100 or Pt1000 Standard), Solution Ground Liquid Earth (316SS or Platinum), Dual pH/ORP All-In-One Configuration and Conventional or Differential Analog preamplifier to allow for interfacing with most any existing OEM transmitter.

- Available end of cable terminations include tinned leads, BNC connector for pH sensors and ORP sensors without integral preamplifier.

- **Quick disconnect IP67 & NEMA 6P rated** waterproof and corrosion resistant **Q7M/Q7F snap connector** option is available for pH sensors and ORP sensors with integral preamplifiers.

- **HiQDT SMART DIGITAL MODBUS RTU pH & ORP SENSORS FOR DIRECT CONNECTION TO ANY PLC, HMI, SCADA** or any other data acquisition or control device that can serve as the MODBUS RTU master.
    - The PLC or HMI employed can either be customer supplied or else ASTI supplied as a part of a turn-key ready system ready for plug and play field commissioning right out of the box.

    - ASTI supplied HMI & PLC include options for advanced smart touchscreen controllers with full remote access suitable use in for Class I, Division II hazardous locations as well as Explosion-Proof controller suitable for use in hazardous Class I, Division I EX rated locations. Lower cost instrumentation options also exist for use in safe non-hazardous locations as well as blind installations if no local display is required.

- **Available in smart digital configurations for use with intelligent pH/ORP digital transmitters. Detailed information about this smart digital type configuration option can be found in the separate 3TX-HiQ digital pH/ORP measurement product webpage.**

- Quick-Disconnect Twist Lock Bayonet Style Receptacles allow for easy and fast insertion and removal from process line for calibration and cleaning. Available in KYNAR® (Poly-Vinylidene-Fluoride, PVDF) material of construction with stainless steel locking pins and KETASPIRE® (Poly-Ether-Ether-Ketone, PEEK) material of construction with Hastelloy C-276 locking pins.

- Double O-ring design ensures secure seal during operation; Standard material of construction is Viton®-75, with CV75, Simriz® 485 and Kalrez® 4079 Optional

- Back of sensor can be sealed with waterproofing option for use in immersion or submersible type applications as well as for inline use. For immersion and submersible installation it is recommended to add a protective tines option (“GR” or “GRO”) as well as a **Waterproofing Option for Fully Submersible Assemblies**.

- Each standard sensor selection and/or special customized sensor design are based upon a thorough review of the customer supplied application information by senior in-house chemists to ensure that the best possible choice of available pH sensor or ORP sensor model and options is made at the lowest possible price configuration which is suitable for the intended process measurement & installation scheme.

- pH sensors & ORP sensors are manufactured with rugged RADEL® (Poly-Phenyl-Sulfone, PPSU), KETASPIRE® (Poly-Ether-Ether-Ketone, PEEK) or RYTON® (Poly-Phenylene-Sulfone, PPS) for the sensor body housing material of construction.

- The solid state reference is highly resistant to dehydration and our thick wall glass is nearly impervious to cracking, even under high pressure conditions.

- **Thick-wall break resistant low-profile parabolic pH glass element for slurry and viscous type process media extends service life for tough installations.**
    - This type of rugged parabolic thick-wall, low-profile, break-resistant pH glass is now standard for all X3XX series pH sensors.

- **Novel extreme dehydration resistant reference technology option allows sensor to endure prolonged exposure to dryness as well as intermittent wet and dry operation conditions for batch applications and uncertain fluid levels**
    - Invoked with Alpha Prefix “E” on supported sensor models

- **Special “Self-Powered” pH sensor configuration allows for extended cable lengths up to 1,000 feet, bridging leads across terminal strip, support for quick disconnect snap connectors and use in noisy electrical areas with pH transmitters that do not support preamplifiers:**

* *8X31 RADEL-KYNAR series pH sensor*
* *“GR” 4 each protective tines*
* *1″MNPT PEEK twist lock receptacle*

* *8741 PEEK-KYNAR series pH sensor*
* *Organic Solvent & Gas Resistant*
* *Optional Kalrez 4079 “O”-Rings*

* *8X52 RYTON-HDPE series sensor*
* *“PtD” Dual pH/ORP All-In-One*
* *“GR” 4 each protective tines*

* *8X51 RYTON-KYNAR series pH sensor*
* *“GR” 4 each protective tines*
* *Waterproofing “C” for Submersible Installation*

**** 8X52 RYTON-HDPE series pH sensor***
**** "GR" 4 each protective tines***
**** Wide Range MUGG pH glass***

APPLICATIONS FOR IOTRON™ TWIST LOCK QUICK DISCONNECT BUILT-TO-ORDER pH SENSORS & ORP SENSORS WITH EXTENSIVE CUSTOMIZATION OPTIONS

- Measurement in strong acids or bases
- Acid fluoride etching solutions
- HF waste treatment systems
- High Temperatures & Pressures
    - Examples include ammonium nitrate manufacturing, sugar extraction
    - Treatment of discharge from processes employing autoclaves
- Pulp digesters for Kraft type mills

- Bleaching lines for white paper mills
- Abrasives and Viscous Processes
- Extraction of precious metal ore with floatation tanks and concentrators
- Gold extraction circuits with cyanide (batch or continuous)
- Cyanide destruction with peroxide and/or sulfur dioxide
- Dissolved Sulfides such as hydrogen sulfide gas (H_2S), hydrogen sulfide (HS^-) or sulfide ion (S^{2-})
- Solvent extraction (SX) with kerosene and other long chain hydrocarbons
- Measurement in most Volatile Organic Compounds (VOC) and most Organic Solvents
- Biodiesel and ethanol fuels
- Processes employing dissolved chlorine (Cl_2), chlorine dioxide (ClO_2), ammonia (NH^3), sulfur dioxide (SO_2) and nitric oxide (NO) and nitrous oxide (NO_2) sometimes together referred to as (NO_x) type gases
- Municipal or industrial wastewater treatment
- General Purpose pH monitoring or control for discharge compliance

View Selected Case Studies as Examples of Selected Applications

TECHNICAL CAPABILITIES OF IOTRON™ TWIST LOCK QUICK DISCONNECT BUILT-TO-ORDER pH SENSORS & ORP SENSORS WITH EXTENSIVE CUSTOMIZATION OPTIONS

- Low pH range down to -0.5 (with ASTI calibration procedures and buffers)
- High pH range up to 14.5 (with ASTI calibration procedures and buffers)
- Low Temperatures down to -15 degrees Celsius (°C)
- High Temperatures up to 150 degrees Celsius (°C)
- High Pressures up to 100 psig (with PEEK twist lock receptacle mounting hardware)
- Insertion depths up to 6 feet into tank or line with **compression fitting assembly installation scheme**
- Mining Slurries up to 50% solid & particulate content
- Solids Content up to 12% consistency pulp
- Fluorides up to 50,000 ppm and -0.5 pH
- Support for measurement in most dissolved gases up to saturation
    - Examples include chlorine, chlorine dioxide, ammonia, sulfide gases

- Cyanides up to 10,000 ppm
- Almost All Organic Chemical Mixtures
    - Minimum ~1% aqueous content required to ensure stable readings
- Clean in Place (CIP) processes with hot acid and hot base for food and beverage and pharmaceutical use
- Sterilization with Peroxide (H_2O_2) and Ozone (O_3)
- Up to 600% Saturation Dissolved Oxygen (O_2)
- Fully submersible assembly that can be installed by thick reinforced vinyl tubing seal on cable
    - For best results the use of a suitable immersion tube, standpipe or guiderod is recommended to fix the installation location and to minimize mechanical related damage is recommended

PLEASE INQUIRE FOR ANY CAPABILITIES NOT LISTED HERE

Materials of Construction & Dimensional Drawings for Twist Lock Sensor Bodies & Receptacles for 1″MNPT Twist Lock Bayonet Style Quick Disconnect Inline Installations

8X51 & 8X52 Series Sensors – Body Housing RYTON®
Poly-Phenylene-Sulfone, PPS

RYTON (PPS) Chemical Resistance

RYTON® R-4-230BL Specifications

8X31 Series Sensors – Body Housing RADEL®
Poly-Phenyl-Sulfone, PPSU

RADEL® R-5000 NT Chemical Resistance Chart

RADEL® R-5000 NT Thermal & Mechanical Performance Data

8X41 Series Sensors – Body Housing KETAPSIRE®
Poly-Ether-Ether-Ketone, PEEK

KETASPIRE (PEEK) Chemical Resistance

KETASPIRE® KT-880 NT Specifications

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Dimensional Drawings for 1″ MNPT Twist Lock Quick Disconnect Bayonet Style Sensors
pH Sensor & ORP Sensor Bodies for Inline, Immersion & Submersible Installations

Twist Lock pH Sensor Dimensional Drawing 8-1
Hemispherical pH Glass Element

80X1 Series General Purpose & Wide Range Resistant

81X1 & 82X1 Series High Temp & Ultra-High Temp Resistant

84X1 Series Acid, Fluoride & HF Resistant
86X1 Series hydrogen sulfide gas (H_2S), hydrogen sulfide (HS^-) or sulfide ion (S^{2-}) Resistant

87X1 Series Aggressive Dissolved Gas & Volatile Organic Solvent Resistant
89X1 Series Saturated Sodium (Brine) Resistant

Twist Lock pH Sensor Dimensional Drawing 8-2
Low-Profile Parabolic Thick-Wall Break-Resistant pH Glass

83X1 Series Slurry & Viscous Media Resistant
85X1 Series Pulp & Paper Resistant

Twist Lock ORP Sensor Dimensional Drawing 8-1-Pt
Low-Profile Platinum Ball Style ORP Sensing Element

88X1 Oxidation Reduction Potential (ORP) Series

1″MNPT KYNAR® PVDF and KETASPIRE® PEEK Twist Lock Receptacles for Quick Disconnect Inline Installation

PEEK receptacle rated to 100 psig (left) and KYNAR receptacle rated to 50 psig (right)

Twist Lock Quick Disconnect pH Sensor and ORP Sensor Selection Guide

The dimensional detail drawing for the KYNAR® PVDF and KETASPIRE® PEEK Twist Lock Receptacles is linked below:

1″MNPT Twist Lock Receptacle in KYNAR® PVDF or KETASPIRE® PEEK Material of Construction

The twist lock sensor and receptacle installation assembly drawing linked below shows the 1″MNPT KYNAR® PVDF or KETASPIRE® PEEK receptacle interfaced with any suitable mating 1″MNPT Twist Lock Sensor such as the 8X51, 8X52, 8X31, 8X41 or 8XX0 sensor series.

Installation assembly drawing for 1″MNPT twist lock receptacles interfaced with 1″MNPT twist lock quick disconnect sensors

Please carefully check the recommend maximum temperature and pressure rating of your twist lock sensor prior to installation. Note that the max pressure rating for each twist lock sensor may be dependent upon whether it is used with the KYNAR® PVDF or KETASPIRE® PEEK twist lock receptacle.

Twist Lock pH Sensors & ORP Sensors for Quick

Disconnect Bayonet Style Inline Installations for use with 1″ MNPT Twist Lock Receptacles

Description of pH/ORP Sensor Series *KYNAR Junction for all 8XX1 Sensors HDPE Junction for all 8XX2 Sensors*	**Sensor Body Housing RYTON® Poly-Phenylene-Sulfone, PPS**	**Sensor Body Housing RYTON® Poly-Phenylene-Sulfone, PPS**	**Sensor Body Housing RADEL® Poly-Phenyl-Sulfone, PPSU**	**Sensor Body Housing KETASPIRE® Poly-Ether-Ether-Ketone, PEEK**
General Purpose	**8052**	**8051**	**8031**	**8041**
High Temperature Resistant	N/A	**8151**	**8131**	**8141**
Ultra High Temperature Resistant	N/A	N/A	**8231**	**8241**
Slurry & Viscous Material Resistant	**8352**	**8351**	**8331**	**8341**
Acid, Fluoride & HF Resistant	**8452**	**8451**	**8431**	**8441**
Paper & Pulp Resistant	N/A	**8551**	**8531**	**8541**
Sulfide Resistant	N/A	**8651**	**8631**	**8641**
Aggressive Dissolved Gas & Volatile Organic Solvent Resistant	N/A	N/A	**8731**	**8741**
Oxidation Reduction Potential a.k.a. ORP	**8852**	**8851**	**8831**	**8841**
Saturated Sodium (Brine) Resistant	**8952**	**8951**	**8931**	**8941**

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wist Lock pH Sensor & ORP Sensor Options

- All 8X31, 8X41, 8X51 & 8X52 series pH sensors and ORP sensors are supplied without tines (no guard) as the standard configuration (default). Four (4) each protective tines (“GR”) or 2 each protective tines (“GRO”) are available in both the full length 0.5″ inches (for pH sensors) or the reduced 0.3″ inch length (typically for parabolic pH or ORP sensors).

- Fast temperature compensation response may be desired for some installations with variable temperature conditions (Iotron™ ACCU-TEMP™).
    - The ACCU-TEMP™ (“X”) option is recommended for most Twist Lock inline installations for best temperature compensation as well as for immersion and submersible installations where the sensor will be frequently removed from service for cleaning and recalibration.

- All Twist Lock sensors can have the waterproofing option added for submersible sensor installations.
    - **Link to Submersible Assemblies with Water Proofing Option Webpage**

- All Twist Lock pH sensors or ORP sensors may be mounted from rear using the 1″ MNPT threads for immersion installations using a suitable mating insertion tube, standpipe or guide rod.

- It is recommended to add a protective tines (guard) option when installing the Twist Lock pH sensors or ORP sensors for immersion or submersible style installations.

- For inline installations, use the 1″ MNPT Twist Lock Receptacle which are available in either KYNAR material of construction with stainless steel locking pins (max 50 psig) or PEEK material of construction with Hastelloy C-276 locking pins (max 100 psig).

- Twist Lock pH sensors or ORP sensors can be installed with a variable insertion depth into a process line or tank using a compression fitting only scheme (see link below)
    - **COMPRESSION FITTING ONLY NPT VARIABLE INSERTION DEPTH SAMPLE INSTALLATION DRAWING**

- Sensors with integral preamplifiers can be supplied with the rugged field ready Q7M/Q7F NEMA 6P rated quick disconnect snap connector system. See pictures shown below for visualization of this option.

Q7M sensor end of cable snap connector detail close-up view

Q7F-Xm-TL Female Q7F snap to tinned leads extension cable

Q7M/Q7F snap connectors are NEMA 6P rated when interfaced.

Installation Guide for Q7M/Q7F Quick Disconnect Snap Connector for pH/ORP sensors with conventional integral preamplifiers; For all modern Rosemount & ASTI Transmitters

Installation Guide for Q7M/Q7F Quick Disconnect Snap Connector for pH/ORP sensors with 5-wire differential preamplifiers; For all modern HACH & GLI Transmitters

APPENDIX "A"

Custom Applications	**Add-On Alpha Prefix**
Dissolved Gas Resistant	"A" or "C"
Organic Media Applications*	"L"
Teflon Silicone Required*	"TS"
Triple Junction*	"TJ"
High-Level HF Resistant*	"HF"
Impact & break resistant low-profile parabolic pH glass for slurries*	"X3XX" & "X5XX" series
Aggressive Dissolved Gas & Organic Solvent Resistant Configuration*	"X7XX" series
Extreme Dehydration Resistant*	"E"
Custom Configurations	**Add-On Alpha Prefix**
ACCU-TEMP™ Option for Fast Temperature Response*	"X"
Low Impedance Glass*	"Z"
316SS Solution Ground Addition*	"Y"
Platinum Solution Ground Addition*	"Pt"
Platinum Solution Ground with 2 each reference half-cells allows for simultaneous use on two completely separate input channels or transmitters Addition*	"PtD"
3-wire TC*	"M"
Add 4 each Protective Tines (for Twist Lock Series Only)*	"GR"
Add 2 each Protective Tines (for Twist Lock Series Only)*	"GRO"
Shielded & Reinforced Preamplifier Blue Cable*	"BL"

Upgrade from standard Viton® -75 to CV75, Simriz® 485 or Kalrez® 4079*	“W”, “U” or “K” respectively

*** Additional charges apply for these options. Not all options available on all models (inquire to factory).**

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Dual pH/ORP all-in-one analog sensor configuration is shown above. This sensor configuration allows for the measurement of pH, ORP and temperature from one sensor when connected to a separate isolated pH channel and isolated ORP input channel. This dual pH/ORP all-in-one style sensor is also available in a smart digital type configuration as well which includes a NEMA 6P rated waterproof snap connector. The smart digital dual pH/ORP all-in-one twist lock quick disconnect bayonet style inline installation configuration can be visualized in the photo below shown with a 1”MNPT PEEK twist lock receptacle installed on the sensor for easy insertion and removal from the process for convenient maintenance tasks such as cleaning without coiling the sensor cable.

Replacement pH & ORP Sensors
For Transmitters that support and/or require Integrated Preamplifiers

The instruments listed below require and/or support integral preamplifiers. Sensors to mate with these OEM pH & ORP transmitters are supplied with the appropriate integrated temperature compensation element, solution ground & OEM compatible high-impedance CMOS operational amplifier (a.k.a. preamplifier) as may be required to ensure full compatibility and optimal performance. Some manufacturers and analyzer models can support both sensors with or without preamplifiers on the same instrument. A sensor hook-up schematics for interfacing to the given OEM pH/ORP transmitter is supplied with each sensor, and some of the most common wiring schematic are posted on our website (please inquire for any not listed).

Fully Supported Hardware – FULL COMPATIBILITY

Manufacturer	pH & ORP Transmitters	OEM pH & ORP Sensors *
Rosemount Analytical Liquid Division A Part of Emerson Process Management	**LEGACY:** 1000, 1001, 1002, 1003, 1050, 1181, 1055, 2081, 3081, 81, 54pH, 54epH, XMT **MODERN:** 1056, 1057, 56, 1066, 5081, 6081	385/385+, 389, 3900 pH & ORP sensors 3300HT, 3400HT & 3500P PERpH-X™ pH & ORP sensors 397, 398/398R, TF396 TUpH™ pH & ORP sensors

Foxboro Analytical EChem by Schneider Electric (a Division of Invensys)	**LEGACY:** 870IT **MODERN:** 875PH, 876PH, 873PH, 873DPX	PH10 DolpHin™ pH sensors, ORP10 DolpHin™ ORP sensors, 871A & 871PH pH & ORP sensors, EP460 & EP466 pH & ORP sensors
Honeywell (formerly Leeds and Northrup, a.k.a. L&N)	**LEGACY:** 7030, 7075, 7076, 7079, 7081, 7082 , 7083, 7084, 7096, 9782 **MODERN:** UDA2182, APT2000PH, APT4000PH	7773, 7774/7774D, 7777/7777D/7777DVP, 7794DVP Sanitary DURAFET™, HB/HB546, HB/HBD547, HB/HB551
Electro-Chemical Devices (a.k.a. ECD)	**LEGACY:** T20, T21, T27, T29, T30, C22 **MODERN:** T23, T28	S10 (PHS10) and S17 (PHS17)

* ASTI offers pH & ORP sensors compatible with the transmitters listed above as an alternative to mating OEM pH & ORP sensors detailed.
Trademarks (indicated with ™) are registered to the respective corporations as listed above.

Replacement pH & ORP Sensors
For Transmitters DO NOT SUPPORT Integrated Preamplifiers

The instruments listed below do no support preamplifiers. Sensors to mate with these OEM pH & ORP transmitters are supplied with the appropriate internal temperature compensation and/or solution ground signals to ensure compatibility. A sensor hook-up schematics for interfacing to the given OEM pH/ORP transmitter is supplied with each sensor, and the some of the most common wiring schematic are posted on our website (please inquire for any not listed). If longer cable runs may be required for your planned installation, it is recommended to select a transmitter that supports preamplifiers (see list to the left).

Fully Supported Hardware – FULL COMPATIBILITY

Manufacturer	**pH & ORP Transmitters**	**OEM pH & ORP Sensors ***
Endress+Hauser (a.k.a. E+H)	**LEGACY:** CPM152, CPM280, CPM431 **MODERN:** CPM153, CPM223, CPM253	Inquire to ASTI Factory for alternatives to E+H pH & ORP sensors
Mettler-Toledo International (formerly Ingold)	**LEGACY:** 1120, 1140, 2050, 2100, 2220, 2400, 2500, 2800X, 2050e, pH 2100-PA, pH 2100e **MODERN:** M200, M300, M400, M700, M800	Inquire to ASTI Factory for alternatives to Mettler-Toledo pH & ORP sensors

ABB (formerly TBI-Bailey)	**LEGACY:** TB515, TBN580, TB701/702, 4630, 4631, 4635, 4636, AX416, AX436, AX468, AX460, AX466 **MODERN:** AX460, AX416, AX436, APA592, TB82pH, TB84pH,	AP100, AP200, AP300, TB(X)551, TB(X)556, TB(X)557, TB(X)561, TB(X)567, TB(X)587
Knick	**LEGACY:** Stratos Eco 2402 **MODERN:** Stratos Evo, Stratos Pro A2 pH, Stratos Pro A4 pH, Stratos Eco 2405 pH, Stratos 2221 pH, Stratos Stratos 2231 pH, Protos 3400(X)-035, PHU 3400(X)-110	Inquire to ASTI Factory for alternatives to Knick pH & ORP senso

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Supported Hardware with Known Issues – LIMITED COMPATIBILITY

Manufacturer	**pH & ORP Transmitters**	**OEM pH & ORP Sensors ***
Rosemount Analytical Liquid Division A Part of Emerson Process Management	**LEGACY:** 1054, 1054A, 1054B, 1055	385/385+, 389, 3900 pH & ORP sensors 3300HT, 3400HT & 3500P PERpH-X™ pH & ORP sensors 397, 398/398R, TF396 TUpH™ pH & ORP sensors

HACH (formerly Great Lakes Instruments, a.k.a. GLI)	**LEGACY:** 33, 53, 60, 62, 63, 70, 83, 90, 95, 570, 670, 671, 690, 691, 692, P33, P53, P63 **MODERN:** si792, si794, PRO-P3 GLI PRO series, sc200	**Encap Diff pH Sensors:** 6028P0, 6028P020, 6028P050, 6028P033, 6058P0, 6022P0, 6022P020, 6028P015, 6028P025000010N, 6028P420, 6052P0, 6058P01000A000N, 6028P510, 6028P4, 6028P210000010N, 6058P025, 6028P090, 6058P4, 6028P6, 6028P01000A000N, 6028P012, 6028P010F00000N, 6028P010000010N, 6022P610, 6022P010000200N, 6022P050, 6058P610F00010N, 6058P6, 6058P050, 6028P010000200N, 6022P2, 6058P010000000N, 6058P033, 6058P620 **3/4 in Combination pH/ORP Sensors:** PC1R1A, RC1R5N, PC1R2A, PC1R1N, PC1R3A, PC1R1A-V12, PC2K1A, PC2K2A, PC3K2A, PC1R2N, RC2K5N, PC1R1A-STC, RC1R5N-HF **Analog Differential pH/ORP Sensors:** PD1P1, PD1R1, PD2P1, PD1R3, PD1P3, PD3P1, PD2P1A30, PD2P1A50, PD1P1A25, PD2P3, PD1P1-PRO1
GF (Georg Fischer) Signet a.k.a +GF+	**LEGACY:** 710, 2720, 9030, 9040, 8710, 5700 **MODERN:** 9900, 8900, 8750	2724-2726 pH/ORP Electrodes, 2734-2736 pH/ORP Electrodes, 2774-2777 Threaded DryLoc pH/ORP Electrodes, 2764-2767 Differential DryLoc pH-ORP Electrodes, 3719 pH/ORP Wet-Tap, 2714-2717 pH/ORP Electrodes

* ASTI offers pH & ORP sensors compatible with the transmitters listed above as an alternative to mating OEM pH & ORP sensors detailed.

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Download the Complete Printable Twist Lock Product Brochure (PDF)

Supported Hardware with Known Issues – LIMITED COMPATIBILITY

Manufacturer	pH & ORP Transmitters	OEM pH & ORP Sensors *
Yokogawa Electric Corporation (Formerly Johnson Yokogawa Controls, a.k.a. JYC)	**LEGACY:** pH/ORP 200, pH/ORP 400, pH/ORP 202, pH/ORP 402, pH150, pH100, OR100 **MODERN:** PH450G, PH202G	FU20 pH/ORP Combined Sensor, PH8EFP, PH8ERP, OR8EFG, OR8ERG pH/ORP Sensors

* ASTI offers pH & ORP sensors compatible with the transmitters listed above as an alternative to mating OEM pH & ORP sensors detailed.

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Most of the pH/ORP transmitter models listed also have a both contacting conductivity and toroidal (inductive contactless) conductivity transmitter counterpart to which ASTI can also supply alternative sensors to the OEM model sensors. Please inquire for any such conductivity retrofit and replacement sensor needs as well as for the pH & ORP measurements.

The manufacturers and models detailed on this webpage are not a complete listing of the supported OEM pH & ORP transmitters, analyzers and controllers to which ASTI can retrofit our replacement pH, ORP and conductivity sensors.

PLEASE INQUIRE FOR COMPATIBILITY INFORMATION ABOUT ANY INSTRUMENTATION NOT LISTED HERE

Naturally, all of the ASTI pH, ORP and Ion selective (ISE) sensors are compatible with our own **2TX, 3TX and 4TX transmitters**