



Advanced Sensor Technologies Part Numbering Guide

pH, ORP and Ion Selective sensor part numbers consist of four major components denoted by the following set of variables:

PREFIX XXXX-YYYY-ZZZ

- | | |
|---------------------------|----------|
| 1. Alpha Prefix | “PREFIX” |
| 2. Model Number(s) | “XXXX” |
| 3. Integrated Electronics | “YYYY” |
| 4. Cable Length in Feet | “ZZZ” |

Note # 1: components 1 & 2 are always separated by a space
 Note # 2: components 2 & 3 and 3 & 4 are always separated by a hyphen (-)

1. Alpha Prefix “PREFIX”

For Standard pH or ORP Sensors:
 PREFIX = “PN”

For Standard Ion Selective Sensors:
 PREFIX = “AB”

For Custom Applications or Configurations, additional characters (add-ons) may be placed at the end of the standard Alpha Prefix (PREFIX) to denote these special features. *** Please consult APPENDIX A for details*

2. Model Number(s) “XXXX”

- There is a list of standard model numbers available on the ASTI web-site or sales binder.
- There are four numbers in each model number, each position of which has a specific meaning

Position # 1 “XXXX” The physical mounting configuration of probe “6” = Immersion (3/4”- 3/4” or 3/4” – 1” MNPT) “8” = 1” MNPT Twist Lock “9” = 1” O.D. Valve Retractable** <i>** Please consult APPENDIX B for details on how to specify overall sensor length</i>	Position # 3 “XXXX” The type of plastic housing “1” = PVC and/or CPVC “3” = PEI (ULTEM) “4” = PEEK “5” = RYTON (PPS)
---	--

Position # 2 “XXXX” The application for which the sensor is designed “0” = wide range “1” = high temperature “2” = ultra high temperature “3” = slurry/viscous material “4” = acid/fluoride “5” = paper/pulp “6” = sulfide(s) “7” = ultrapure water “8” = ORP measurement “9” = saturated sodium/brine	Position # 4 “XXXX” This indicates the generation number of the model “0” = Ion Selective Sensor, available in PEI (Ultem) Plastic Housings only <i>** Please consult APPENDIX C</i> “1” = first generation design and/or mounting configuration “2” = second generation design and/or mounting configuration
--	--



Generic Model Numbers “XXXX”

Mounting Configuration & Plastic Housing Description

6XX0, 6XX0A, 8XX0
(ION SELECTIVE SENSORS)

¾” – 1” MNPT ULTEM Immersion (6XX0)
¾” – ¾” MNPT CPVC Immersion (6XX0A)
1” MNPT ULTEM Twist Lock (8XX0)
*** Please consult APPENDIX C for details on Ion Selective Part Number*

6X11, 6X12, 6X32, 6X42
(pH / ORP SENSORS)

¾” – ¾” MNPT Immersion Configuration Series in:
PVC/CPVC (6X11)
CPVC (6X12)
ULTEM (6X32)
PEEK (6X42)

6X51, 6X31, 6X41, 6X52
(pH / ORP SENSORS)

¾” – 1” MNPT Immersion Configuration Series in:
RYTON (6X52, 6X51)
ULTEM (6X31)
PEEK (6X41)

8X51, 8X31, 8X41
(pH / ORP SENSORS)

1” MNPT Twist Lock Configuration Series in:
RYTON (8X51)
ULTEM (8X31)
PEEK (8X41)

9X12, 9X31
(pH / ORP SENSORS)

1” O.D. Valve Retractable Configuration Series in:
CPVC (9X12)
ULTEM (9X31)

PNS 6X31 (6X31/SN)
(pH / ORP SENSORS)

2 ½” O.D. Sanitary Configuration Series in:
ULTEM (PNS 6X31)

Some standard models can be combined:
Some Typical Examples Include:

XXXX = “6831/6631”
(¾” – 1” MNPT ULTEM Bodied sulfide resistant ORP sensor)
XXXX = “6351/6551”
(¾” – 1” MNPT RYTON Bodied slurry & pulp resistant pH sensor)
XXXX = “8431/8131/8631”
(1” MNPT ULTEM Twist Lock acid/fluoride, high temp. & sulfide resistant pH sensor)
XXXX = “6241/6441”
(¾” – 1” MNPT PEEK Bodied ultra high-temp and acid resistant pH sensor)
XXXX = “6132/6332”
(¾” – ¾” MNPT ULTEM Bodied high temp. slurry resistant pH sensor)
XXXX = “6131/6931”
(¾” – 1” MNPT ULTEM Bodied high temp. saturated sodium resistant pH sensor)
XXXX = “PNS 6031/6131/6331”
(2 ½” DIA Sanitary ULTEM Bodied wide-range (for CIP), high temp. & slurry/viscous material resistant pH sensor)
XXXX = “PN 8851/8151/8651”
(1” MNPT RYTON Bodied high temp. & sulfide resistant ORP sensor)

**Note: Not all-theoretical combinations of part numbers are possible.
Consult ASTI website, sales binder or factory for details.**



3. Integrated Electronics “YYYY”

A variety of electronics may be integrated into most sensors. These include the following categories:

- 1. Thermocompensators Elements
- 2. Preamplifiers
- 3. No Electronics

1. *ThermoCompensators Elements*

Current List includes:

3000 Ohm Balco,	YYYY = “3000” (Typical for TBI-Bailey / ABB & Jenco Transmitters)
301 Ohm GLI Assy,	YYYY = “301” (Typical for Great Lakes and Compatibles)
1000 Ohm Platinum,	YYYY = “1000” (Typical for Foxboro, Johson Yokogawa, Mettler Toledo)
100 Ohm Platinum,	YYYY = “100” (Typical for Rosemount, Endress-Hausser & others)
8500 Ohm Resistor	YYYY = “8500” (Typical for Leeds & Northrup, Honeywell)

Note: Other TC Elements may be available upon request

Find below a list of common instrument that require only temperature compensation elements and solution ground elements in addition to the standard pH/ORP and reference inputs. As this list is not complete, please inquire about other instrumentation.

Replacement Sensors for Meters that do NOT REQUIRE Integrated Preamplifiers

Fully Supported Hardware

Endress+Hauser (100% Compatible, FULL SUPPORT)
 CPM 223/253, CPM 152, CPM 153, CPM 280, CPM 431

Mettler Toledo - Ingold (100% Compatible, FULL SUPPORT)
 1120, 1140, 2050, 2100, 2220, 2400, 2500, 2800X
 M700, pH 1140, pH 2050e, pH 2100-PA, pH 2100e

TBI-Bailey Controls (100% Compatible, FULL SUPPORT)
 TB515, TBN580, TB701/702, TB82pH, TB84pH, 4630
 4631, 4635, 4636, AX416, AX436, AX468, AX460, AX466

Supported Hardware with Known issues

Johnson Yokogawa (Limited Compatibility, Some Known Issues)
 pH/ORP 200, pH/ORP 400, pH/ORP 202, pH/ORP 402
 pH150, pH100, OR100



2. *Preamplifiers*

Note: Not all preamplifiers are available in all configurations. All preamplifiers are supported for all ¾"-1" MNPT Immersion and 1" MNPT Twist Lock sensor series.

Below is a list of common instruments that require integrated preamplifiers in addition to the normal temperature compensation and solution ground elements in conjunction with the standard pH/ORP and reference inputs. **Some of these meters can also operate with only a temperature compensation element, utilizing an international amplifier in the meter rather than the preamplifier in sensor configuration.** As this list is not complete, please inquire about other instrumentation.

Replacement Sensors for Meters that REQUIRE Integrated Preamplifiers**

Fully Supported Hardware

Electro-Chemical Devices (100% Compatible, FULL SUPPORT)

T-20, T-21, T-27, T-28, T-29, T-30, C-22

Foxboro (100% Compatible, FULL SUPPORT)

870IT , 873, 873DPX, 875IT

Jenco (100% Compatible, FULL SUPPORT)

6311

Fully Supported Hardware (continued)

Leeds and Northrup (Honeywell) (100% Compatible, FULL SUPPORT)

7030, 7075, 7076, 7079, 7081, 7082 , 7083, 7084, 7096, 9782

Uniloc-Rosemount (100% Compatible, FULL SUPPORT)

1000, 1001, 1002, 1003, 1050, 1181 , 1054, 1054A, 1054B, 1055, 2081, 3081, 81, 54pH/ORP, 54e, 5081, XMT

Supported Hardware with Known issues

Uniloc-Rosemount (Limited Compatibility, Some Known Issues)

1054, 1054A & 1054B

Great Lakes Instruments (Most models supported, Some minor known issues)

33, 53, 60, 62, 63, 70, 83, 90, 95, 570, 670

671, 690, 691, 692, P33, P53, P63, Pro-Series P3

Supported Hardware w/ Known issues (continued)

Signet (Limited Compatibility, Some Known Issues)

710 et. al., 2720, 9030, 9040, 8710, 8750, 5700

IC Controls (Limited Compatibility, Some Known Issues)

650, 652, 653, 653-9, 654, 655, 656, 657

Aquametrix (Most models supported, Some minor known issues)

SHARK, 2200P, 2200R

To designate any of the above preamplifiers, simply insert the model for component three as it appears listed above.

Example: YYY = "5081" (Uniloc-Rosemount Model 5081 compatible preamplifier)

YYY = "870IT" (Foxboro 870IT preamplifier)

YYY = "GLI5" (Great Lakes – GLI – 5 wire differential compatible preamplifier)

3. *No Electronics*

If no electronics are desired, YYY = "0000"

4. Cable Length "ZZZ"

Simply designate the desired cable length in units of feet. Ten (10) feet are provided free of charge, any additional cable is charged per the prices indicated on the current ASTI Sensor Price List.

Limitations on cable length:

For sensors with NO Preamplifier:

MAX LENGTH = 15 - 50 feet (dependent upon sensor & meter)

For sensors with preamplifier:

MAX LENGTH = 150 - 350 feet (for all meters & sensors)



Complete pH, ORP & Ion Selective Sensor Part Numbers “PREFIX XXXX-YYYY-ZZZ” with Descriptions

PN 6031-3000-15

¾”-1” MNPT PEI Immersion, Wide Range pH sensor with 3000 Ohm TC and 15 feet cable

PNA 6131/6431-3000-10

¾” – 1” MNPT PEI Immersion, high temperature and acid/fluoride resistant pH sensor with 3000 Ohm TC and 10 feet cable

PNLTS 6842/6642-0000-10

¾” – ¾” MNPT PEEK Immersion, sulfide and organic solvent resistant ORP sensor w/ Teflon silicone, No TC and 10 feet cable

PNLA 8041/8141-5081-25

1” PEEK Twist Lock wide range & high temperature resistant pH sensor with Uniloc-Rosemount 5081 preamplifier and 25 feet cable

PNC 8431-873-50

1” PEI Twist Lock acid/fluoride resistant pH sensor with Foxboro 873 preamplifier and 50 feet of cable

PNI 9331-GLI5-10

1” O.D. PEI Valve Retractable slurry/viscous resistant pH Sensor w/ no blowout protection, differential GLI 5-wire compatible preamplifier and 10 feet cable

PNC 9831/9331/60-1000-30

1” O.D. Valve Retractable slurry/viscous resistant ORP sensor with an overall length of 60 inches, 1000 Ohm TC & 30 feet cable

AB 8100-100-20

1” MNPT PEI Twist Lock fluoride ion selective sensor with 100 Ohm TC and 20 feet cable (for drinking water)

AB 6100-1181-20

1” – 1 ¼” MNPT PEI Immersion fluoride ion selective sensor with Uniloc-Rosemount 1181 preamplifier and 20 feet cable

ABA 6410-54-50

¾”-1” MNPT PEI Immersion dissolved gas resistant ammonium ion selective sensor, with Rosemount compatible 54 preamplifier and 50 feet cable

AB 8440-870IT-15

1” PEI Twist Lock calcium ion selective sensor with Foxboro 870IT preamplifier and 15 feet cable

ABC 8160-PT91-20

1” PEI Twist Lock dissolved gas resistant cyanide ion selective sensor with PT91 preamplifier and 20 feet cable

PNA 6051-6311-15

¾” – 1” MNPT RYTON Immersion general purpose pH sensor with 3000 Ohm TC & Jenco 6311 preamplifier and 15 feet cable

PNA 8351/8651-TB82-10

¾” – 1” MNPT RYTON Immersion slurry/viscous and sulfide resistant pH sensor with 3000 Ohm TC and 10 feet cable

PNS 6331/6131-1000-15 (for 2100e Mettler Toledo Meter)

2 ½” DIA ULTEM Sanitary slurry/viscous and high temperature resistant pH sensor with 1000 Ohm TC and 15 feet cable with wiring for Mettler Toledo 2100e transmitter



APPENDIX A “PREFIX”

Explanation of Alpha Prefix (PREFIX) add-ons and examples with full description

Custom Applications

Add-On Alpha Prefix

Dissolved Chlorine Gas	“C”
Dissolved Ammonia Gas	“A”
Organic Media Applications	“L”
Teflon Silicone Required*	“TS”
Triple Junction*	“TJ”
Position Insensitive Assembly*	“H”
Mid-Level HF Resistant	“MF”
High-Level HF Resistant	“HF”
Accu-Temp Option for Fast Temperature Response*	“X”
Low Impedance Option	“GP”

Custom Configurations

Add-On Alpha Prefix

Removal of Sensor Guard (For Immersion or Valve Retractable Series Only)	“NG”
Additional of Sensor Guard (for Twist Lock Series Only)	“GR”
Solution Ground Addition (Indicated for Sensor Without Preamplifiers Only)*	“Y”
Double Length Junction (for Valve Retractable Series Only)*	“DLJ”
Remove Protective Guard for Valve Retractable Sensors (9X31 & 9X12)	“I”

**Additional charge applies for these options, consult current ASTI price list for details or contact ASTI Factory.*

Notes:

- 1) *Not all options are available for all sensor series. Contact ASTI Factory for details.*
- 2) *Waterproofing Options are indicated as a separate line item option for each different sensor model. Waterproofing options for submersible sensors are not integrated into the sensor part number.*



Examples of Alpha Prefixes with add-ons:

PREFIX = "PNCI"

pH/ORP 1" Valve Retractable sensor with front-end blowout protection removed (-I) for compression fitting only installs, for dissolved chlorine (-C) applications

PREFIX = "PNLDLJ"

pH/ORP 1" Valve Retractable assembly with double length junction (-DLJ) for organic solvent containing custom application

PREFIX = "ABTJ"

Ion Selective sensor with triple junction (-TJ) for custom application requiring extensive protection for reference element

PREFIX = "PNLTS"

pH/ORP sensor for organic media (-L) and solvent (-TS) containing applications

PREFIX = "PNCHRTJ"

pH/ORP sensor for with triple junction (-TJ) for temperature fluctuation resistant (-HR) operation for dissolved chlorine (-C) applications

PREFIX = "PNXHF"

pH/ORP sensor for with ACCU-TEMP temperature element option (-X) for fast temperature response for high fluoride (-HF) applications

PREFIX = "PNGRLTJ"

1" Twist Lock pH/ORP Sensor with tines added (-GR) and triple junction (-TJ) for organic media applications (-L)

APPENDIX B "XXXX"

Designating overall valve retractable sensor body length

- If no special indication is made, all Valve Retractable sensors come with an overall length of 17.75 inches for 1" O.D. Valve Retractable sensor models
- If a greater overall length is required, this is designated by using a "/" at the end of Model Number "XXXX/overall length"
- The overall length is always designated in inches. For overall lengths greater than 60 inches, please consult factory.
- There is an additional fee to extending the overall length. Sensor body extensions come and are priced in 6 and 12 inch increments for 1" O.D. models. Please consult current ASTI sensor accessories price list

Examples: XXXX = "9031/30"

1" O.D. Valve Retractable wide range pH sensor with an overall length of 30 inches

APPENDIX C "XXXX"

Designating the ion selective sensor

- There is a list of ion selective part numbers and the corresponding ion measured in the ASTI sales binder and website.
- All ion selective membranes fall into three categories: polycrystalline (solid-state), glass, and organic polymer.
- The interferences for each membrane are available from the factory if not specified on existing documentation.