

# Thermo Scientific AquaSensors AnalogPlus

Differential pH sensor – 1.5 inch

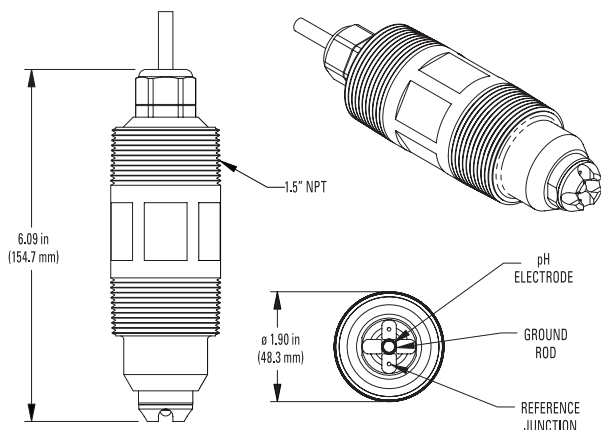
Thermo Scientific™ AquaSensors AnalogPlus™ series for challenging process applications.

## AquaSensors AnalogPlus™ pH 1.5 Sensor

- 1.5 inch NPT mounting
- Differential pH sensor designed for continuous use in the most demanding industrial applications
- Large reference chamber reduces calibration frequency
- Replaceable salt bridge extends sensor life
- Offered with NTC300 or PT1000 temperature element
- Electrode protection options
- Available in choice of materials for a wide range of applications

## Markets/Applications

- Wastewater treatment
- Pharmaceutical
- Chemical & petrochemical
- High purity water
- Food processing
- Metal finishing



## Engineering Specifications

1. The pH sensor shall be a differential electrode technique design using two electrodes to compare the process value to a stable internal reference standard buffer solution. The standard electrode shall have non-flowing and fouling-resistant characteristics.
2. The sensor shall have hex-shaped wrench flats to facilitate mounting, and shall be constructed of a material with exceptional chemical resistance and mechanical strength. This material shall enable the sensor to be installed in metal fittings without leakage usually caused by heating and cooling cycles when dissimilar materials are threaded together.
3. The sensor shall have 1.5 inch NPT threads on both ends to mount into a standard 1.5 inch pipe tee, a 2 inch union mounting, or immersion hardware assembly. Sanitary tri-clamp mounting optional.
4. The built-in electronics of the sensor shall be completely encapsulated and O-ring sealed for protection from moisture and humidity.
5. The sensor shall have an integral temperature sensor to automatically compensate measured values for changes in process temperature.
6. The sensor shall include a titanium ground electrode (standard) to eliminate ground loop currents in the measuring electrode. 316 SS optional.
7. The sensor shall be Thermo Scientific AquaSensors AnalogPlus differential pH.

## Thermo Scientific AquaSensors AnalogPlus pH 1.5 Sensor

- **Global support**—with experience that comes from supporting our customers for over 35 years throughout the world, our water quality specialists and customer support teams offer a quick, thorough and professional response to any problem encountered.
- **Focus on user benefits**—we work closely with you to define your needs, and ensure you are using the monitor in a way that improves your bottom line. For more information, contact your local water quality specialists or visit: [www.thermoscientific.com/processwater](http://www.thermoscientific.com/processwater).

### AnalogPlus pH 1.5 Sensor Specifications

<b>Measurement System Performance<sup>†</sup></b>	<b>Range:</b> 0 to 14 pH <b>Resolution:</b> 0.01 pH <b>Accuracy:</b> 0.1 % of reading <b>Step Response Time:</b> 90 % in 30 seconds
<b>Operational Environment</b>	<b>PEEK Sensor Head</b> <b>Temperature Range:</b> -5 °C to 95 °C <b>Maximum Pressure:</b> 100 psig @ 95 °C <b>Maximum Flow Rate:</b> 10 ft/second <b>CPVC Sensor Head</b> <b>Temperature Range:</b> -5 °C to 75 °C <b>Maximum Pressure:</b> 85 psig @ 75 °C <b>Maximum Flow Rate:</b> 10 ft/second
<b>Construction</b>	<b>Process Electrodes:</b> "G", "HF", low temperature, pure water or high temperature glass <b>Ground Rod:</b> Titanium, 316 stainless steel or Hastelloy® C <b>O-rings:</b> Viton® (other materials available) <b>Sensor Material:</b> PEEK or CPVC <b>Weight:</b> 0.5 lbs (PEEK or CPVC)
<b>Approvals</b>	Meets CE requirements for heavy industrial use

<sup>†</sup>Note: Typical at 25 °C with 20 feet of cable



Thermo Scientific AV88  
Universal Analyzer

Connects to any AnalogPlus Sensor using plug-in module. 2 line display and 7 key navigation. Data reporting with up to 2 current outputs. 2 Form C relays. Digital communications.

### AnalogPlus pH 1.5 Sensor Ordering Information

Part No.	Description
<b>FP-b-t-x-y-z-u</b>	<b>pH Sensor 1.5</b>
<b>Body Material (b)</b>	<b>2 = CPVC</b> <b>3 = PEEK</b>
<b>Electrode Type (t)</b>	<b>1 = Standard glass</b> <b>4 = Pure water</b> <b>2 = HF glass</b> <b>5 = High temperature</b> <b>3 = Low temperature</b>
<b>Sensor Tip (x)</b>	<b>A = Protected</b> <b>B = Process flat</b>
<b>Temperature Element (y)</b>	<b>8 = NTC300/P99 analyzer</b> <b>9 = PT1000/AV88 analyzer</b>
<b>Ground Rod (z)</b>	<b>D = 316 stainless steel</b> <b>E = Titanium (standard)</b> <b>F = Hastelloy C</b>
<b>Cable Length (u)</b>	<b>1 = 10 feet</b> <b>2 = 20 feet</b> <b>3 = 30 feet</b>

### Accessories Ordering Information

Part No.	Description
<b>Local Display Interface</b>	
<b>AV88</b>	Universal analyzer; ¼ DIN, outputs, relays, digital communications options
<b>P99</b>	pH/ORP analyzer; ½ DIN, outputs, relays
<b>Salt Bridge Replacements</b>	
<b>SBS01</b>	PEEK protected
<b>SBS02</b>	PEEK process flat
<b>SBS03</b>	CPVC protected
<b>SBS04</b>	CPVC process flat
<b>SBC01</b>	Storage cap with sponge
<b>pH Solutions—500 mL Bottles</b>	
<b>RCS03</b>	pH storage solution
<b>RCS01</b>	Standard cell solution
<b>PHS0L4</b>	4 pH buffer
<b>PHS0L7</b>	7 pH buffer
<b>PHS0L10</b>	10 pH buffer
<b>Mounting Hardware</b>	
<b>MH2022</b>	1.5 inch tee mounting, CPVC
<b>MH2011</b>	1.5 inch tee mounting, 316 stainless steel
<b>MH2032</b>	2 inch union mounting, CPVC
<b>MH2031</b>	2 inch union mounting, 316 stainless steel
<b>MH2242</b>	Hand rail mounting assembly, swivel/immersion, PVC
<b>MH2083</b>	1.5 inch immersion mounting with junction box, PVC (7 foot extension is standard)

Consult factory for additional configurations and accessories.