

# Thermo Scientific AquaSensors AnalogPlus

Conductivity/resistivity sensors— 1.0 inch general purpose

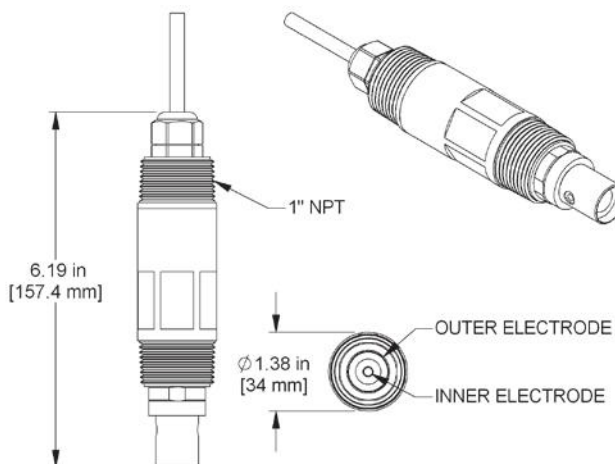
Thermo Scientific™ AquaSensors AnalogPlus™ series for challenging process applications.

## AquaSensors AnalogPlus™ Conductivity/Resistivity Sensors

- Two-electrode conductivity sensors designed for continuous use in the most demanding industrial applications
- 0 to 5000  $\mu\text{S}/\text{cm}$  measurement range (1.0 cell)
- 0 to 18.2  $\text{M}\Omega/\text{cm}$  measurement range (0.01 cell)
- Titanium electrodes (0.01, 0.1 and 1.0 cell constants)
- Offered in PEEK for high temperature applications
- Offered in CPVC where higher cost materials are not required

## Markets/Applications

- Food processing
- Pharmaceutical
- Water production
- Reverse osmosis filters
- Ultrafiltration
- Distilled water
- Semiconductor
- Power generation



## Engineering Specifications

1. The conductivity sensor shall have two electrodes manufactured to exacting tolerances using durable metals.
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 inch NPT threads on both ends to mount into a standard 1 inch pipe tee, a 1.5 inch union mounting, or immersion hardware assembly.
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 be Thermo Scientific AquaSensors AnalogPlus conductivity.

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## Thermo Scientific AquaSensors AnalogPlus Conductivity 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 Conductivity Sensor Specifications

<b>Measurement System Performance<sup>†</sup></b>	<b>Range:</b> <b>0.01 Cell:</b> 18.2 MΩ/cm to 50 μS/cm <b>0.1 Cell:</b> 0 to 500 μS/cm <b>1.0 Cell:</b> 0 to 5000 μS/cm <b>Resolution:</b> 4.5 significant digits <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> 150 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> 150 psig @ 75 °C <b>Maximum Flow Rate:</b> 10 ft/sec (3 m/sec)
<b>Construction</b>	<b>Cell Constants<sup>‡</sup>:</b> 0.01 for resistivity, 0.1 and 1.0 for conductivity <b>Electrode Material:</b> Titanium or 316 stainless steel <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.



Thermo Fisher Scientific  
Water Analysis Instruments  
Chelmsford, MA USA  
Quality Management System  
Registered to ISO 9001

### AnalogPlus Conductivity Sensor Ordering Information

Part No.	Description
<b>SC-b-c-x-z-u</b>	<b>Conductivity Sensor</b>
<b>Body Material (b)</b>	<b>2</b> = CPVC <b>3</b> = PEEK
<b>Electrode Type (c)</b>	<b>1</b> = Titanium <b>2</b> = 316 stainless steel
<b>Sensor Tip (x)</b>	<b>A</b> = 0.10 cell constant (500 μS/cm range; PEEK material recommended) <b>B</b> = 1.0 cell constant (5000 μS/cm range) <b>D</b> = 0.01 cell constant (resistivity to 50 μS/cm range; PEEK material required)
<b>Electrode Spacing (z)</b>	<b>1</b> = Concentric
<b>Cable Length (u)</b>	<b>10</b> = 10 feet (3 m) <b>20</b> = 20 feet (6 m) <b>30</b> = 30 feet (9 m)

### Accessories Ordering Information

Part No.	Description
<b>Local Display Interface</b>	
<b>AV88</b>	Universal analyzer; ¼ DIN, outputs, relays, digital communications options
<b>COND 2000W</b>	Conductivity analyzer, ½ DIN, outputs, relays
<b>Cap Replacements</b>	
<b>SBC01</b>	Storage cap with sponge
<b>ORP Solutions—500 mL Bottles</b>	
<b>SOL1000</b>	1000 μS/cm calibration solution
<b>SOL2000</b>	2000 μS/cm calibration solution
<b>SOL5000</b>	5000 μS/cm calibration solution
<b>Mounting Hardware</b>	
<b>MH3022</b>	1 inch tee mounting, CPVC
<b>MH3011</b>	1 inch tee mounting, 316 stainless steel
<b>MH3042-COND</b>	1.5 inch union mounting, CPVC
<b>MH3041-COND</b>	1.5 inch union mounting, 316 stainless steel
<b>MH1112</b>	1.5 inch ball valve, low pressure, CPVC
<b>MH1111</b>	1.5 inch ball valve, low pressure, 316 stainless steel
<b>MH1122</b>	1.5 inch ball valve, high pressure, CPVC
<b>MH1121</b>	1.5 inch ball valve, high pressure, 316 stainless steel
<b>MH1242</b>	Hand rail mounting assembly, swivel/immersion, PVC
<b>MH3083</b>	1 inch immersion mounting with junction box, PVC (7 foot extension is standard)

Other conductivity sensors and mounting hardware options available upon request. Consult factory for details.

[thermoscientific.com/processwater](http://thermoscientific.com/processwater)

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