

Thermo Scientific AquaSensors
AnalogPlus series for challenging
process applications

Thermo Scientific AquaSensors AnalogPlus

Conductivity/Resistivity Sensors – 1.0 Inch

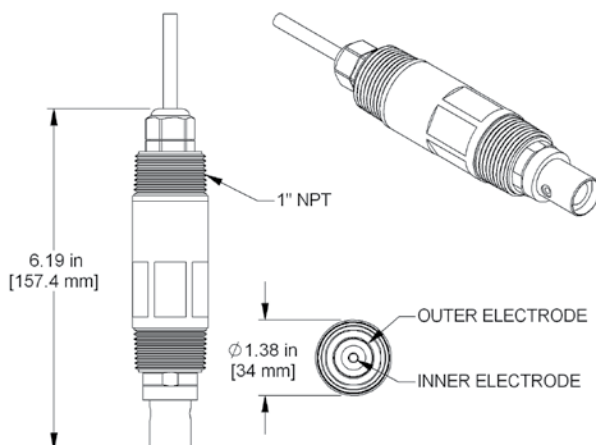


AquaSensors AnalogPlus™ Conductivity/Resistivity Sensors

- 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 $\text{M}\Omega \cdot \text{cm}$ 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 | • Ultrafiltration |
| • Pharmaceutical | • Distilled water |
| • Water production | • Semiconductor |
| • Reverse osmosis filters | • 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.
7. The sensor shall be Thermo Scientific AquaSensors AnalogPlus conductivity.

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.thermo.com/processwater.

AnalogPlus Conductivity Sensor Specifications

Measurement System Performance†	Range: 0.01 Cell: 18.2 MΩ • cm to 50 mS/cm 0.1 Cell: 0 to 500 mS/cm 1.0 Cell: 0 to 5000 mS/cm Resolution: 4.5 significant digits Accuracy: 0.1% of reading Step Response Time: 90% in 30 seconds
Operational Environment	PEEK Sensor Head Temperature Range: -5 °C to 95 °C Maximum Pressure: 150 psig @ 95 °C Maximum Flow Rate: 10 ft/second CPVC Sensor Head Temperature Range: -5 °C to 75 °C Maximum Pressure: 150 psig @ 75 °C Maximum Flow Rate: 10 ft/second
Construction	Cell Constants†: 0.01 for resistivity, 0.1 and 1.0 for conductivity Electrode Material: Titanium or 316 stainless steel O-rings: Viton® (other materials available) Sensor Material: PEEK or CPVC Weight: 0.5 lbs (PEEK or CPVC)
Approvals	Meets CE requirements for heavy industrial use

† Note: Typical at 25°C with 20 feet of cable

Conductivity Sensor Ordering Information

Part No.	Description
SC-b-c-x-z-u-R	Conductivity Sensor
Body Material (b)	2 = CPVC 3 = PEEK
Electrode Type (c)	1 = Titanium 2 = 316 Stainless Steel
Sensor Tip (x)	A = 0.01 Cell (Resistivity) B = 0.1 Cell (Conductivity) C = 1.0 Cell
Electrode Spacing (z)	1 = Concentric
Cable Length (u)	1 = 10 feet 2 = 20 feet 3 = 30 feet

Accessories Ordering Information

Part No.	Description
Local Display Interface	
AV88	Universal Analyzer; 1/4 DIN, Outputs, Relays, Digital Communications Options
C99	Conductivity Analyzer, 1/2 DIN, Outputs, Relays
Cap Replacements	
SBC01	Storage Cap With Sponge
Conductivity Solutions - 500 mL bottles	
SOL1000	1000 µS/cm Calibration Solution
SOL2000	2000 µS/cm Calibration Solution
SOL5000	5000 µS/cm Calibration Solution
Mounting Hardware	
MH3022	1 Inch Tee Mounting, CPVC
MH3011	1 Inch Tee Mounting, 316 Stainless Steel
MH3042	1.5 Inch Union Mounting, CPVC
MH3041	1.5 Inch Union Mounting, 316 Stainless Steel
MH1112	1.5 Inch Ball Valve, Low Pressure, CPVC
MH1111	1.5 Inch Ball Valve, Low Pressure, 316 Stainless Steel
MH1122	1.5 Inch Ball Valve, High Pressure, CPVC
MH1121	1.5 Inch Ball Valve, High Pressure, 316 Stainless Steel
MH1242	Hand Rail Mounting Assembly, Swivel/Immersion, PVC
MH3083	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.



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.

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