

Thermo Scientific AquaSensors AnalogPlus

Differential ORP sensor – 1.5 inch

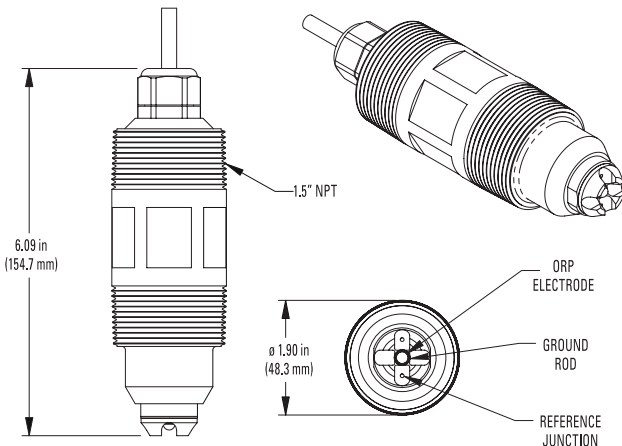
Thermo Scientific™ AquaSensors AnalogPlus™ series for challenging process applications.

AquaSensors AnalogPlus™ ORP 1.5 Sensor

- 1.5 inch NPT mounting
- Differential ORP 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
- Metal finishing
- Bleaching pulp
- Disinfection control



Engineering Specifications

1. The ORP sensor shall be a differential electrode technique design using two electrodes to compare the process value to a stable internal reference 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 an immersion hardware assembly. Tri-clamp mounting is 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 measure temperature independently.
6. The sensor shall include a titanium ground electrode (standard) to eliminate ground loop currents in the measuring electrode. xxx shall be optional.
7. The sensor shall be the Thermo Scientific AquaSensors AnalogPlus Differential ORP.

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Thermo Scientific AquaSensors AnalogPlus ORP 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.

AnalogPlus ORP 1.5 Sensor Specifications

Measurement System Performance[†]	Range: -2100 mV to +2100 mV Resolution: 0.1 mV 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: 100 psig @ 95 °C Maximum Flow Rate: 10 ft/second CPVC Sensor Head Temperature Range: -5 °C to 75 °C Maximum Pressure: 85 psig @ 75 °C Maximum Flow Rate: 10 ft/second
Construction	Process Electrodes: Platinum or gold Ground Rod: Titanium (standard), 316 stainless steel or Hastelloy® C 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



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.

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

AnalogPlus ORP 1.5 Sensor Ordering Information

Part No.	Description
FR-b-t-x-y-z-u	ORP 1.5 Sensor
Body Material (b)	2 = CPVC 3 = PEEK
Electrode Type (t)	1 = Platinum 2 = Gold
Sensor Tip (x)	A = Protected B = Process flat
Temperature Element (y)	8 = NTC300/P99 analyzer 9 = PT1000/AV88 analyzer
Ground Rod (z)	D = 316 stainless steel E = Titanium (standard) F = Hastelloy C
Cable Length (u)	1 = 10 feet 2 = 20 feet 3 = 30 feet

Accessories Ordering Information

Part No.	Description
Local Display Interface	
AV88	Universal analyzer; ¼ DIN, outputs, relays, digital communications options
P99	pH/ORP analyzer; ½ DIN, outputs, relays
Salt Bridge Replacements	
SBS01	PEEK protected
SBS02	PEEK process flat
SBS03	CPVC protected
SBS04	CPVC process flat
SBC01	Storage cap with sponge
ORP Solutions—500 mL Bottles	
RCS04	ORP storage solution
RCS01	Standard cell solution
ORPSOL200	200 mV calibration
ORPSOL600	600 mV calibration
Mounting Hardware	
MH2022	1.5 inch tee mounting, CPVC
MH2011	1.5 inch tee mounting, 316 stainless steel
MH2032	2.0 inch union mounting, CPVC
MH2031	2.0 inch union mounting, 316 stainless steel
MH2242	Hand rail mounting assembly, swivel/immersion, PVC
MH2083	1 inch immersion mounting with junction box, PVC (7 foot extension is standard)

Consult factory for other sensor mounting options.

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