

# Thermo Scientific AquaSensors AnalogPlus

Dissolved oxygen (ppm) sensor

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

## AquaSensors AnalogPlus™ DO Sensor

- Polarographic sensor design for continuous use in the most demanding industrial applications
- Replacement membrane caps for long life
- 0 to 40 ppm measurement range
- 0.01 ppm resolution

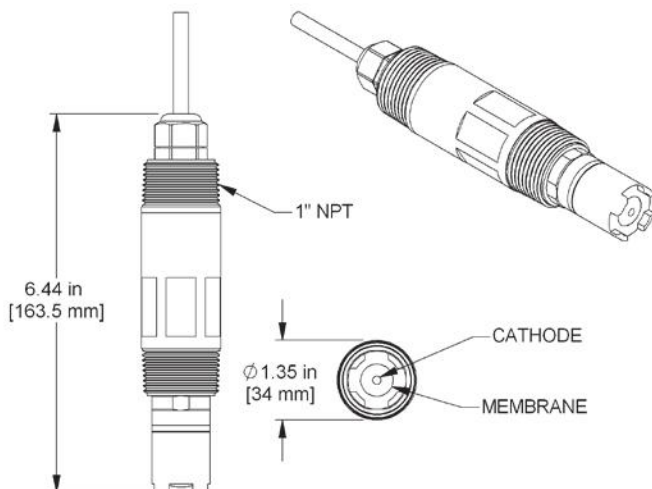
## Markets/Applications

- Municipal and industrial wastewater
- Aquaculture
- Brewing
- Fermentation
- Bio-processing
- Many applications also exist in chemical process, food and dairy, pulp and paper, and other process industries



## Engineering Specifications

1. The DO sensor shall use three-electrode polarographic Clark cell technology consisting of a silver reference electrode, a silver anode and a gold cathode.
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 mounting hardware.
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. Replaceable membrane caps shall have a pre-installed 50 micron thick gas permeable membrane.
7. The sensor shall be the Thermo Scientific AquaSensors AnalogPlus DO.



**Thermo**  
SCIENTIFIC

## Thermo Scientific AquaSensors AnalogPlus DO 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 DO Sensor Specifications

<b>Measurement System Performance<sup>†</sup></b>	<b>Range:</b> 0 to 40 ppm, 0–200 % saturation <b>Resolution:</b> 0.01 ppm <b>Accuracy:</b> 1 % of reading <b>Step Response Time:</b> 90 % in 90 seconds
<b>Operational Environment</b>	<b>Temperature Range:</b> -5 °C to 50 °C <b>Maximum Pressure:</b> 65 psig @ 50 °C <b>Maximum Flow Rate:</b> 10 ft/second
<b>Construction</b>	<b>Process Electrodes:</b> Gold cathode, silver anode, silver reference (3 electrode polarographic Clark cell) <b>Membrane:</b> FEP Teflon <sup>®</sup> <b>O-rings:</b> Viton <sup>®</sup> (other materials available) <b>Sensor Material:</b> PEEK <b>Weight:</b> 0.5 lbs (PEEK)
<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.

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

### AnalogPlus DO Sensor Ordering Information

Part No.	Description
<b>SD-b-t-x-y-z-u</b>	<b>DO Sensor</b>
<b>Body Material (b)</b>	<b>3 = PEEK</b>
<b>Electrode Type (t)</b>	<b>1 = Gold/silver</b>
<b>Sensor Tip (x)</b>	<b>A = Protected</b> <b>B = Process flat</b> <b>C = Face seal</b>
<b>Filling Solution (y)</b>	<b>1 = Standard</b>
<b>Membrane (z)</b>	<b>A = FEP Teflon</b> <b>B = FEP with SS mask</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>DO Membrane Replacements</b>	
<b>DMR03</b>	PEEK protected
<b>DMR03M</b>	PEEK protected with protected mask
<b>DMR04</b>	PEEK face seal
<b>DMR04M</b>	PEEK face seal with protected mask
<b>DMR08</b>	PEEK process flat
<b>DMR08M</b>	PEEK process flat with protected mask
<b>SBC01</b>	Storage cap with sponge
<b>DO Solutions—500 mL Bottles</b>	
<b>RD0K1</b>	Electrolyte (ppm)
<b>Wash Hardware</b>	
<b>MH1142</b>	Wash head assembly
<b>Mounting Hardware</b>	
<b>MH3022</b>	1 inch tee mounting, CPVC
<b>MH3011</b>	1 inch tee mounting, 316 SS
<b>MH3042</b>	1.5 inch union mounting, CPVC
<b>MH3041</b>	1.5 inch union mounting, 316 SS
<b>MH1112</b>	1.5 inch ball valve, CPVC, low pressure
<b>MH1111</b>	1.5 inch ball valve, 316 SS, low pressure
<b>MH1122</b>	1.5 inch ball valve, CPVC, high pressure
<b>MH1121</b>	1.5 inch ball valve, 316 SS, high pressure
<b>MH1242</b>	Hand rail mounting assembly, swivel/immersion, PVC
<b>MH1252</b>	Hand rail mounting assembly, swivel mount with ball float
<b>MH3083</b>	1 inch immersion mounting with junction box, PVC (7 foot extension is standard)

Consult factory for additional configurations and accessories.

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

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