

## Thermo Scientific AquaSensors AnalogPlus

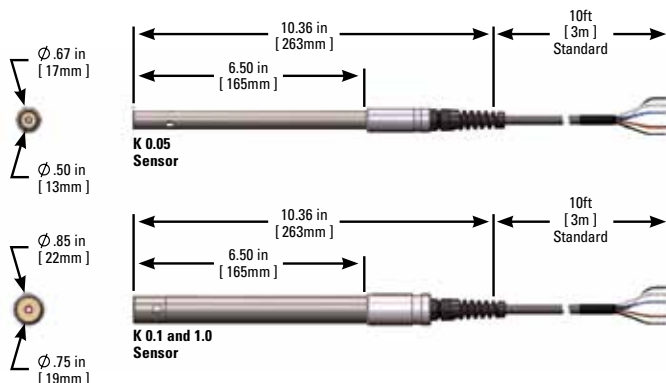
### Conductivity/Resistivity Sensors – Compression Fitting Style

#### AquaSensors AnalogPlus™ Conductivity/Resistivity Sensors - Compression Fitting Style

- Two-electrode conductivity sensors designed for continuous use in demanding industrial applications
- Versatile process mounting with 3/4" and 1/2" swage style compression fittings
- 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 (0.05, 0.1 and 1.0 cell constants)
- Available with PVDF (Kynar) or 316SS fittings
- Pt 1000 RTD temperature compensation element
- Designed for up to 200 psi (1379 KPa) @ 257° F (125° C)

#### Markets/Applications

- Water Production
- Reverse Osmosis Filters
- Ultrafiltration
- Distilled Water
- Rinse Water
- Semiconductor
- Power Generation
- Metal Finishing



#### Engineering Specifications

1. The two-electrode contacting conductivity sensor shall have enhanced performance design characteristics:
  - a) Manufactured to exacting tolerances using high quality, durable materials.
  - b) Include a Pt1000 RTD temperature compensation element for fast response to changes in process temperature with  $\pm 0.1^\circ \text{C}$  accuracy.
  - c) Tested to exacting standards, ensuring highest possible measurement accuracy.
2. The sensor shall measure from theoretical pure water (0.057  $\mu\text{S}/\text{cm}$  or 18.2  $\text{M}\Omega \cdot \text{cm}$ ) up to 5,000  $\mu\text{S}/\text{cm}$ .
3. The compression fitting style sensor shall be constructed with a titanium electrode with PEEK insulator and nominal cell constants of 0.05, 0.1 or 1.0/cm.
4. Sensor shall have a 1/2 inch NPT or 3/4 inch NPT swage style compression fitting made of Kynar® (PVDF) or 316 stainless steel. It shall directly mount into a pipe tee, tank or vessel, and have an adjustable insertion depth of 1.38 (35 mm) to 5.0 inches (127 mm). Reversing the compression fitting shall enable the sensor to be attached onto the end of a pipe for immersion applications.
5. The sensor shall have a choice of extension cable lengths from 3 m (10 ft.), with transmission distances up to 300 ft (91 m) via extension cable to any Thermo Scientific analyzer/controller.
6. The sensor shall be the AnalogPlus Model KC-Series from Thermo Scientific AquaSensors.

## 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/water](http://www.thermoscientific.com/water).

### Model KC Compression Fitting Style Conductivity Sensor

#### Sensor Specifications

<b>Available Cell Constants</b>	1.00, 0.10, and 0.05
<b>With Kynar® PVDF Compression Fitting:</b>	
<b>Operating Temperature</b>	-4 °F to 257 °F (-20 °C to 125 °C)
<b>Maximum Operating Pressure</b>	150 psi @ 100 °F (1034 KPa @ 38 °C) 25 psi @ 257 °F (172 KPa @ 125 °C)
<b>With Stainless Steel Compression Fitting:</b>	
<b>Operating Temperature</b>	-4 °F to 257 °F (-20 °C to 125 °C)
<b>Maximum Operating Pressure</b>	200 psi @ 257 °F (1379 KPa @ 125 °C)
<b>Maximum Flow Rate</b>	10 ft/sec (3 m/sec)
<b>Measuring Range</b>	0 to 5000 µS/cm
<b>Resolution</b>	4.5 significant digits
<b>Temperature Sensor</b>	PT1000 RTD Temperature Element
<b>Wetted Materials</b>	Sensor Body – Titanium Electrodes – Titanium Insulator - PEEK® Seals - Viton® Compression Fitting – 316 Stainless Steel or Kynar® PVDF
<b>Standard Sensor Cable Length</b>	10 ft (3 m)
<b>Maximum Transmission Distance</b>	300 ft (91 m)
<b>Cable Lead Colors</b>	Red Wire (Drive) Black Wire (Sense) White Wire (Temperature) Blue Wire (Ground) Drain/Shield (Earth Ground)

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.

### Ordering Information

#### Model Number

KC Contacting Conductivity Sensor in compression style tube body. Titanium electrodes, PEEK insulator. Integral temperature element for compensation. Connects to any AV88 Universal Analyzer, Alpha COND 2000W Analyzer or compatible conductivity analyzer. Includes compression fitting.

#### Compression Fitting

- 1 ¼ Inch Kynar compression fitting (0.1 and 1.0 Cells only)
- 2 ¼ Inch 316 Stainless Steel compression fitting (0.1 and 1.0 Cells only)
- 3 ½ Inch Kynar compression fitting (0.05 Cell only)
- 4 ½ Inch 316 Stainless Steel compression fitting (0.05 Cell only)

#### Reserved Category

#### Sensor Tip

- A 0.1 Cell Constant (500 µS/cm Range)  
¾ Inch Compression.
- B 1.0 Cell Constant (5000 µS/cm Range)  
¾ Inch Compression.
- E 0.05 Cell Constant  
(Resistivity to 100 µS/cm Range)

#### Reserved Category

#### Cable Length

- 10 10 Feet
- 20 20 Feet
- 30 30 Feet

BC	2	1	<b>AnalogPlus Contacting Conductivity Part Number</b>
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Suggested Analyzers	Description	Part Number
AV88 Universal Analyzer	2 outputs, 2 relays. PID. AC power. ¼ DIN.	AV88CB0C2
	2 outputs, PID, Modbus. 24VDC. ¼ DIN	AV88CB4A1
Alpha COND 2000W Analyzer	2 outputs, 3 relays. AC power. ½ DIN.	TSCONCTP2000W
Mounting Hardware	Description	Part Number
3/4" Compression Fittings	316 Stainless Steel (Spare/replacement)	CF02
	PVDF/Kynar® (Spare/replacement)	CF01
1/2" Compression Fittings	316 Stainless Steel (Spare/replacement)	CF04
	PVDF/Kynar® (Spare/replacement)	CF03

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Water Analysis Instruments  
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