

# **α** ALPHA-RES 1000 RESISTIVITY

## CONTROLLER / TRANSMITTER



*Resistivity Controller/Transmitter packed with features to measure 18.2 MΩ water*

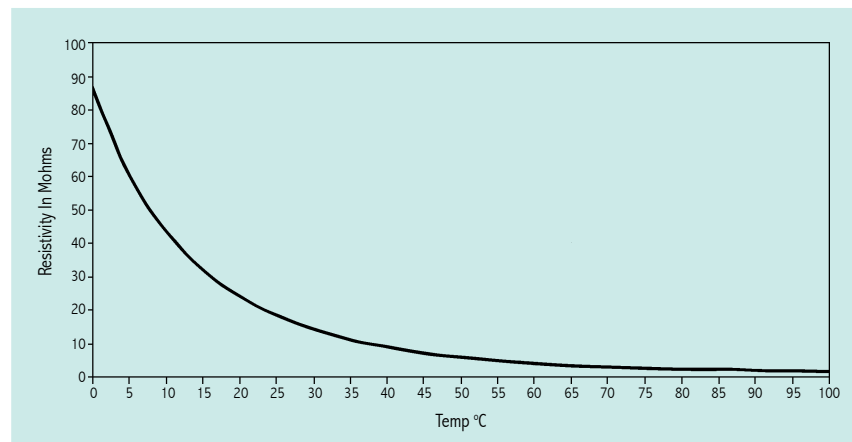
**MEASUREMENT RANGE:** The αpha-RES1000 Resistivity controller offers two measurement ranges with the respective cell constant:

Range No.	Resistivity Range	Cell Constant, K
1	0.00 to 19.99 MΩ	0.01
0	0.000 to 1.999 MΩ	0.1

High level of accuracy,  $\pm 1\%$  of full scale is obtained in ultra-pure or R.O. applications, when used with the appropriate cells and correct temperature coefficient.

**TEMPERATURE COEFFICIENT:** Higher accuracy in resistivity readings is obtained by adjusting the Temperature Coefficient for the sample solution. The αpha-RES1000 controller allows values between 0.0% to 10.0% to be input.

In addition, for "Pure" water applications, a pure water compensation option is available to correct for the non-linearity of pure water temperature correction curves.



**Resistivity Of Pure Water**

**TEMPERATURE COMPENSATION:** Automatic or Manual Temperature Compensation options are standard. Either a Pt1000 or Pt100, two or three-wire systems can be used in the ATC mode. On-line calibration of the temperature probe is possible, in the ATC mode.

Either a Pt1000 or Pt100, two or three-wire systems can be used in the ATC mode. On-line calibration of the temperature probe is possible.

In the absence of a temperature sensor, Manual temperature compensation with independent Calibration and Process temperature inputs offers one-point temperature compensation.

**ELECTRODE DIAGNOSTICS:** After each successful calibration, cell characteristics are displayed. Useful tool in tracking the efficiency of the cell. In the event of an unsuccessful calibration, previous calibration data is retained.

**OUTPUT:** 0/4-20mA output is galvanically isolated with a maximum load of 600Ω. The output is scaleable across the measurement range, maximizing resolution on the chart recorder.

**SPECIFICATIONS:**

<b>αpha-RES1000 Resistivity Controller</b>			
<b>Resistivity Range</b>	<b>Resolution</b>	<b>Accuracy</b>	<b>Cell Constant, K</b>
0.000 to 1.999 MΩ	0.001 MΩ	±1% of Full Scale	0.1
0.00 to 19.99 MΩ	0.01 MΩ	±1% of Full Scale	0.01
Temperature Range	-9.9 to 125 °C With Pt 1000 or Pt 100 (Automatic / Manual Compensation)		
Resolution / Accuracy	0.1 °C / ±0.5 °C		
Temperature Coefficient	Ultra-Pure Water or Linear 0.00 to 10.00%, S/W Selectable @ 25.0 °C		
<b>Set-point And Controller Functions</b>			
Controller Characteristics	Limit Controller		
Pickup / Dropout Delay	0 to 2000 Seconds		
Switching Resistivity Hysteresis	0 to 10% of Full Scale		

\* Refer to back page for specification common to the alpha 1000 series

**RESISTIVITY CELLS**

All cells have integral Pt100 temperature sensor and five-wire double-shielded 25ft cable (open-ended). With pressure tolerance of 6 bar, the cells are suitable for in-line measurements.

For immersion, simply invert the 1/2" NPT threaded adapter for the electrode holder. Cell constants of 0.1 and 0.01 are available in Stainless Steel, SS316. For ultra-pure water applications, the 0.01 cell is available in Titanium.

**SPECIFICATIONS:**

<b>Resistivity Cells</b>			
<b>Specifications</b>	<b>EC-CS10-0-01T</b>	<b>EC-CS10-0-01S</b>	<b>EC-CS10-0-1S</b>
Range	0.00 - 19.99 MΩ		0.000 - 1.999 MΩ
Cell Constant, K	0.01		0.1
Material	Titanium	SS316	
Thread	1/2" NPT		
Pressure Rating	6 Bar		
Temperature Sensor	Integrated Pt100		
Cable	Integrated 25 feet, 5 wire double-shielded, open-ended cable		

**ORDERING INFORMATION:**

<b>Order No.</b>	<b>Item</b>
EC-RESCTP1001	αpha-RES1000 resistivity controller with 110 VAC
EC-RESCTP1002	αpha-RES1000 resistivity controller with 220 VAC
EC-CS10-0-01S	Conductivity cell, 0.01 cell constant, stainless steel
EC-CS10-0-01T	Conductivity cell, 0.01 cell constant, titanium
EC-CS10-0-1S	Conductivity cell, 0.1 cell constant, stainless steel
EC-CS10-1-0S	Conductivity cell, 1.0 cell constant, stainless steel

\* Extension cables available



*For ultra-pure water measurements, 0.01 cell constant probe is available in Titanium, preventing contamination of the purified water.*