



Thermo Scientific Alpha RES 1000 Resistivity Controller/Transmitter:

Resistivity:

The Alpha RES 1000 offers high accuracy across 2 resistivity ranges with adjustable temperature co-efficient and pure water compensation option. Controller/transmitter is equipped with alarm delay and individual set-point hystereses to prevent chattering, false alarms, and unnecessary down time.

- $\pm 1\%$ full scale accuracy across two Resistivity ranges
- Adjustable temperature coefficient from 0.0 to 10.0 % for higher accuracy
- Pure water compensation option corrects non-linearity of pure water temperature correction curves in ultrapure water applications

- Option of Auto or Manual Temperature Compensation. Three-wire system compensates for cable-length resistance errors
- Meter displays electrode information after each successful calibration. Previous calibration data is retained in the event of unsuccessful calibrations
- Galvanically-isolated, scaleable 0/4 to 20 mA output for high-quality output on peripheral devices

$\pm 1\%$ full scale accuracy across two resistivity ranges – even in pure water applications

Specification Information

Resistivity Controller/Transmitter		Alpha RES 1000	
Order Code	TSRESCTP1001	TSRESCTP1002	
Part No.	01X216717	01X216718	
Resistivity:			
Range:	0.000 to 1.999 M Ω ; 0.00 to 19.99 M Ω		
Resolution:	0.001 M Ω ; 0.01 M Ω		
Accuracy:	\pm 1 % full scale reading		
Cell constant:	0.1 ; 0.01		
Temperature:			
Range:	-9.9 to 125 °C		
Resolution:	0.1 °C		
Accuracy:	\pm 0.5 °C		
Sensor:	Pt100 / Pt1000 (jumper selectable)		
Compensation:	Auto/manual (normalized at 25 °C)		
Coefficient:	Ultrapure water or linear 0.00 to 10.00 %		
Set point & controller functions:			
Set point 1 (SP1) / set point 2 (SP2):	0.000 to 1.999 M Ω or 0.00 to 19.99 M Ω		
Switching Resistivity hysteresis:	0 to 10 % of full scale		
Function (switchable):	P control (pulse length/pulse frequency); limit control		
Adjustable period with pulse length controller:	0.5 to 20 sec		
Adjustable period with pulse frequency controller:	60 to 120 pulse/min		
Pickup/dropout delay:	0 to 2000 sec		
Contact outputs:	3 SPDT relays		
Switching voltage/current/power:	Max. 250 VAC / max. 3 A / max. 600 VA		
Alarm functions:			
Function (switchable):	Steady or fleet (pulse)		
Wash cycle:	0.1 to 199.9 hr		
Wash duration:	1 to 1999 sec		
Pickup delay:	0 to 2000 sec		
Switching voltage/current/power:	Max. 250 VAC / max. 3 A / max. 600 VA		
Electrical data & connections:			
Transmitter function:	0/4 to 20 mA scalable outputs for Resistivity, galvanically isolated		
Hold function switch:	To freeze output current and deactivate control relays		
Load:	Max. 600 Ω		
Resistivity input:	2-pin terminal		
Connection terminal:	5-pole, 17-pole terminal, detachable blocks		
Display:			
LCD:	7 segments display with symbols for status information		
Power supply:			
Input:	110 VAC (jumper selectable) ; 48 to 62 Hz ; max. 7 VA	220 VAC (jumper selectable) ; 48 to 62 Hz ; max. 7 VA	
Main fuse:	Slow-blow 250 V / 100 mA		
Pollution degree:	2		
Transient overvoltage category:	II		
EMC specifications:			
Emitted interference:	According to EN 50081-1		
Immunity to interference:	According to EN 50082-1		
Environmental conditions:			
Operating temperature range:	-10 to 50 °C		
Max. relative humidity:	80 % up to 31 °C decreasing linearly to 50 % at 40 °C		
Mechanical specifications:			
Dimensions (WxDxH):	96 x 96 x 175 mm		
Weight:	700 g (unit) / 800 g (packed)		
Ingress protection:	IP54 (front panel)		