

Turbine Temperature Test Set

TT1000A

The TT1000A is a completely self-contained, battery powered, aircraft turbine temperature system tester capable of measuring system lead resistance, insulation, and performing indicator run-outs with a range up to 1000 °C. The unit was specifically designed to meet all requirements for testing aircraft Chromel/Alumel (CH/AL) turbine temperature measuring systems and provides an accurate display of thermocouple outputs in degrees Celsius (°C). The TT1000A is engineered for maximum ease of operation and includes an automatic digital display that practically eliminates human error and reduces testing time to a minimum. The test leads incorporate automatic temperature compensation to remove induced voltage caused by a "Cold Junction" created when the test leads are attached to the aircraft. All of the features designed into the TT1000A have been added to reduce maintenance time and cost as well as provide a maintenance friendly tester for measuring and displaying resistance of thermocouple, thermocouple rings and system lead circuits. Simulates CH/AL thermocouple with or without simulated system lead resistance. Simulates thermocouple outputs and system lead resistances from 0 to 25 ohms. Measures and displays insulation resistance of system wiring and other components. Measures and displays values of CH/AL thermocouple in terms of degrees Celsius (°C) temperature.



Features

- > Automatically compensates for ambient temperature at test lead connection junction point or indicates cold junction temperature
- > Thermocouple and lead resistance measurements to 0.01 ohm and insulation measurements up to two (2) megohms
- > Large, 9mm (0.35") high character, 3 1/2-digit liquid crystal display with pre-programmed legends
- > Range: from 0 to 1000° C certified, -60 to 1160° C extended
- > Measures and displays values of CH/AL thermocouple in terms of degrees Celsius (°C) temperature
- > Simulates CH/AL thermocouple with or without simulated system lead resistance
- > Accuracy: Typical measurement error at ambient (25°C) less than $\pm 1^\circ\text{C}$

TT1000A Options & Accessories

MOD B: Millivoltage doubler. For use on 16-ohm systems.

102-00902 Specially modified TT1000, adapter cable and carrying case for testing GE CF6-80 A, A1 and C2 engines.

102-00903 Specially modified TT1000, adapter cable and carrying case for testing GE CF6-6 and CF6-50 engines.

TT1000A Dimensions

	in.	cm.
Height	5.0	12.7
Width	8.0	20.3
Depth	5.5	14.0
	lbs.	kg
Weight	4.0	1.8

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Call us regarding export restrictions

Turbine Temperature Specifications

Temperature Measurement

	TT1000A	TT1200A
Range	0 to 1000°C certified -60 to 1160°C extended	0 to 1300°C certified -50 to 1372°C extended
Accuracy	Typical measurement error at ambient (25°C) less than $\pm 1^\circ\text{C}$	Typical measurement error at ambient (25°C) less than $\pm 0.5^\circ\text{C}$

Lead Resistance Measurement

	TT1000A	TT1200A
20 Ω Range and resolution	0-19.99 Ω in 0.01 Ω increments	0-19.999 Ω in 0.001 Ω increments
200 Ω Range and resolution	0-199.9 Ω in 0.1 Ω increments	0-199.99 Ω in 0.01 Ω increments
2k Ω Range and resolution	N/A	0-1.9999k Ω in 0.000k Ω increments
20k Ω Range and resolution	N/A	0-199.99k Ω in 0.01k Ω increments
Accuracy	$\pm 0.1\%$ of reading $\pm 0.01\Omega$ (20 Ω) $\pm 0.1\%$ of reading $\pm 0.1\Omega$ (200 Ω)	$\pm 0.05\%$ of reading ± 2 counts

Insulation Measurement

	TT1000A	TT1200A
200k Ω Range and resolution	N/A	0-199.9k Ω in 0.1k Ω increments
2M Ω Range and resolution	0-1.999M Ω in 1k Ω increments	0-1.999M Ω in 0.001M Ω increments
20M Ω Range and resolution	N/A	0-19.99M Ω in 0.01M Ω increments
200M Ω Range and resolution	N/A	0-200M Ω in 5M Ω increments
Accuracy	3% of reading $\pm 1\text{k}\Omega$	5% of reading ± 5 counts (200k Ω , 2M Ω , 20M Ω) 10% of reading ± 5 counts (200M Ω)
Excitation	45V	45V

Other Specifications

	TT1000A	TT1200A
System resistance range	Variable resistance between 2 Ω to 25 Ω	Variable resistance between 2 Ω to 25 Ω
Operating temperature	0 to 50°C	0 to 50°C