



1330A ARTIFACT TRANSFER STANDARD

Three Standards – One Box



Featuring

- ▶ Fully Automated Artifact Calibration of Calibrators and DMMs from a Single Instrument
- ▶ Three Standards – One Box
- ▶ Primary 1 Ω, 10 kΩ, and 10 V references.

Overview

Measurements International's recently launched Artifact Transfer Standard (1330A) is a highly versatile, accurate instrument that meets laboratory requirements for automated artifact calibration (to assign values to internally generated parameters) on calibrators and DMMs. This process is typically performed

using a small number of standards at recommended calibration intervals indicated in the calibrator or DMM manufacturer manual. The 1330A is composed of a temperature-controlled instrument enclosure, three reference standards, and a battery backup. A power supply is external (part of the power cable).

Feature	Benefit
Primary 1 Ω, 10 kΩ, and 10 V references.	All standards provided in one temperature-controlled enclosure.
Clear connection for JVolt Comparison of 10 V Zener.	Providing the highest level of traceability.
Manual (push buttons on the front panel) or automated control (selected by GPIB interface).	Ability to select appropriate standard (choice of 3) for calibration.
Output connections to the calibrator or DMM on the front panel.	Choice of cables available (and supplied) feature direct plug-in for 57XX series calibrators or to the 3458A DMM.
Current standard value is extrapolated from prior calibrations.	Enhanced automation and improved accuracy.
Oven temperature monitored by internal PRT.	Provides better performance of artifacts as the temperature environment is stable and controlled to less than 100 mK.
Calibrated values of the standards entered in the unit.	No requirement for set-up.
Front panel display showing certification value.	Quick access and reference to information.



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Specifications: Rev 7

Artifact Standard	TC ¹	Stability per Year ²	Dissipation
10 V	0.1 $\mu\text{V/V}/^\circ\text{C}$	30 Days: 0.25 $\mu\text{V/V}$	
		90 Days: 0.75 $\mu\text{V/V}$	
		1 Year: 1.5 $\mu\text{V/V}$	
1 Ω	0.1 $\mu\Omega/\Omega/^\circ\text{C}$	1 Year: 0.5 $\mu\Omega/\Omega$	10 mW
10 k Ω	0.1 $\mu\Omega/\Omega/^\circ\text{C}$	1 Year: 0.5 $\mu\Omega/\Omega$	10 mW
Temperature Stability		$\pm 0.1^\circ\text{C}$ Over a 1 Year Period	
Ambient Temperature Range		23 $^\circ\text{C} \pm 5^\circ\text{C}$	
Ambient Humidity Range		20 to 90 % Non-condensing	
Storage (with Battery Removed)		-50 $^\circ\text{C}$ to +50 $^\circ\text{C}$	
Isolation to Earth		$> 10^{12} \Omega$	
Direct Cable to 57XX		Provided	
Power		24-hour Internal Battery ³	
Warranty		Standard 2 Year Parts & Labour	

¹ Temperature Coefficient: 0.2 $\mu\text{V/V}/^\circ\text{C}$ for ambient temperatures outside $\pm 5^\circ\text{C}$

² The above specifications are valid after the first 12 months since manufacture due to the natural aging of the internal artifacts.

³ Optional (72-hour) battery pack (Model 1330A-PS) contained in external enclosure, connects to rear panel of 1330A

Options:

Part Number: 1330-O Output cable to bare ends

Part Number: 1330-C Output cable to custom

Part Number: 1330-PS Battery pack (72-hour) contained in external enclosure, connects to rear panel of 1330A

Part Number: 1330-HC Hard Shipping Case

Other: Contact MI

Shipping: Shipped cold in reusable container; 12 hours of warm-up required to reach operating temperature

Dimensions (L x W x H):
250 x 360 x 180 (mm)

Weight:
10 kg

Shipping Weight:
15 kg

Mains Power:
100 to 250 V_{ac}, 50/60 Hz

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