



AUTOMATED ARTIFACT CALIBRATOR

MODEL 1330A

- Primary 1 Ω , 10 k Ω and 10 V References
- 3 Standards in One Box Inside a Temperature-Controlled Chamber
- Direct Plug-in Cable to 57XX Terminals
- Front Panel or GPIB Controlled to Select Output
- Front Panel Display Showing Certification Value
- Clear Connection for JVolt Comparison of 10 V Zener
- Battery Backup Option > 72 Hours



MODEL 1330A AUTOMATED ARTIFACT CALIBRATOR

FULLY AUTOMATED ARTIFACT CALIBRATION OF CALIBRATORS AND DMM'S FROM A SINGLE INSTRUMENT

The model 1330A is a highly versatile, accurate instrument that meets laboratory requirements for automation of artifact calibration on calibrators and DMMs. The model 1330A Artifact Calibrator is made up of one instrument enclosure and three reference standards. Artifact calibration is used to assign values to internally generated parameters of the calibrator or DMM. It is a process that is typically performed in calibrating an instrument using a small number of standards. Artifact calibration is typically performed at the recommended calibration intervals as indicated in the calibrator or DMM manufacturers manual.

The MI 1330A can be operated both manually and under automated control to select the appropriate standard. Under manual mode the selection is done via push buttons on the front panel. Under automated control the standards can be selected via the GPIB interface. In addition, calibrated values and uncertainties for the artifacts can be entered from the front panel or via the IEEE-488 bus. For enhanced automation, the software has the option to extrapolate the current standard value based on past measurements for improved accuracy of artifact calibration of DUTs.

Output connections to the calibrator or DMM are made from the front panel of the 1330A. The output cable (supplied) features a direct plug in cable for the 57XX series calibrators or to the 3458A DMM. Other cables can be supplied. A selector switch allows selection of the main menu as shown on the front panel display for setting the parameters such as time, date, data input and standards selection to the output.

The model 1330A-PS power supply is contained in its own enclosure and plugs into the rear of the 1330A. An optional battery pack model 1330A-BP and charger that lasts for 72 hours is also available. Other battery packs are available. The 1330A is shipped cold and requires about 12 hours of warm up to reach its operating temperature. The temperature of the oven is monitored by an internal PRT. The 1330A comes with the calibrated values of the standards entered the unit and is shipped in a reusable container.





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Specifications: Rev 0

Artifact Standard	TC ⁽¹⁾	Stability per Year	Dissipation
10 V	0.1 $\mu\text{V}/\text{V}/^\circ\text{C}$	30 Days: 0.25 $\mu\text{V}/\text{V}$ 90 days: 0.75 $\mu\text{V}/\text{V}$ 1 Year: 2 $\mu\text{V}/\text{V}$	
1 Ω	0.1 $\mu\Omega/\Omega/^\circ\text{C}$	1 Year: 0.5 Ω/Ω	10 mW
10 k Ω	0.1 $\mu\Omega/\Omega/^\circ\text{C}$	1 Year: 0.5 Ω/Ω	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	
Warranty		Standard 2 Year Parts & Labour	

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

Options:

PN: 1330-0 Output cable to bare ends
 PN: 1330-C Output cable to custom
 PN: 1330-BP Battery pack

Other: Contact MI

Dimensions (D × W × H):

225 × 305 × 150 (mm)

Weight:

10 kg

Shipping Weight:

15 kg

Main Power:

85 to 264 V – 47 to 440 Hz

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