

Model 3100 Calibration Equipment

*For Fast, Easy, & Precise Calibration of NH Research, Inc.
Test Systems & Instruments*



Model 3100 Universal Calibrator

- Rapid, closed-cover calibration of NH Research, Inc. (NHR) test systems & instruments
- Fully automatic, does not require calibration experts
- Traceability to NIST standards

Applications

The Model 3100 Universal Calibrator is designed to facilitate fast, easy and precise calibration of NHR test systems and instrument products. Used in combination with an external DMM and PC, the Calibrator includes all the necessary precision sources, shunts, control signals and cables required to perform calibration. Most importantly, no longer are individual instruments removed from the test system and then disassembled for potentiometer adjustments, sent to a calibration laboratory or returned to the original manufacturer. Instead, all instruments within a system are calibrated by simply connecting cables to their rear connectors. Because of this unique closed-cover operation, system calibration times are now a few hours rather than days. In addition to this cost savings, calibration can now be more conveniently scheduled and test system availability maximized.



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Universal Capability

The Model 3100 will calibrate 18 different NHR instruments most of which comprise the core of an *emPower*[™]-controlled test systems. The only items not calibrated are 3rd-party instruments such as DSOs, DMMs, and ARBs that have been integrated into NHR test systems for special testing applications.

Precision Current Measurement

The ability to perform current measurements to 0.01% accuracy is usually beyond the capability of most third-party calibration service operations. This level of accuracy, however, is required to calibrate all the NHR high-precision loads. To achieve this level of National Institute of Standards and Technology (NIST) -traceable accuracy, NHR developed the high precision circuits necessary to assure the accuracy not ordinarily found in commercially available calibration instruments.

Fully Automated

An extension of *emPower*[™], the test executive that runs current-generation NHR test systems, is used to control the Universal Calibrator, DMM and optional AC load. An easy-to-follow graphical user interface that includes all cabling hookups makes automatic as well as manual, step-by-step operation straightforward. In this manner specialized calibration services or laboratories are no longer required.

Model 3100 Universal Calibrator Specifications

INSTRUMENTS CALIBRATED		
DC LOADS	AC SOURCE	SYSTEM MEASUREMENT UNITS
Model 4100	Model 5100	5600 Digital Measurement System (DMS)
Model 4110	Model 5400	5700 PowerScope
Model 4200	Model 5427	S430 Power Supply Production Test System
Model 4312		S440 Power Supply Production Test System
Model 4350		S450 Power Supply Production Test System
Model 4700		S650 Power Supply Test System
Model 4760		S660 Power Supply Test System
		S670 Power Supply Test System
DC SOURCES	AC LOAD	DIGITAL POWER ANALYZER
6000 Series	Model 4600	Model 4301 Modular Digital Power Analyzer
6100 Series		

PHYSICAL & ENVIRONMENTAL	
SIZE (H,W,D)	OPERATING TEMPERATURE
Calibrator: 7 x 19 x 15"/178 x 483 x 381mm	25° ± 5° C. after 30-minute warm-up
AC Load: 5 x 19 x 15"/127 x 483 x 381mm	
WEIGHT	ELECTRICAL
Calibrator: 30lbs/14kg	90-132 or 180-264 VAC, switch selectable
AC Load: 21lbs/10kg	

CUSTOMER SUPPLIED EQUIPMENT
Agilent 3458A Digital Multimeter, 81/2 Digit
PC, Windows 7, 1GHz , 512MHz RAM, 60GB Hard Drive, DVD/CD
Drive to include the following I/O ports: Serial, 2 USB and IEEE1394 (for DMS/PowerScope only)
National Instruments PN 778927-01, Controller USB to GPIB IEEE488.2
For S300 calibration contact factory for RS485 interface card designations

HARDWARE SUPPLIED
Model 3100 Calibrator with appropriate target instrument cables
Optional AC Source Calibration: AC Load with cables

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