Measurements International

Metrology is Our Science, Accuracy is Our Business™

HIGH PRECISION VOLTAGE DIVIDER

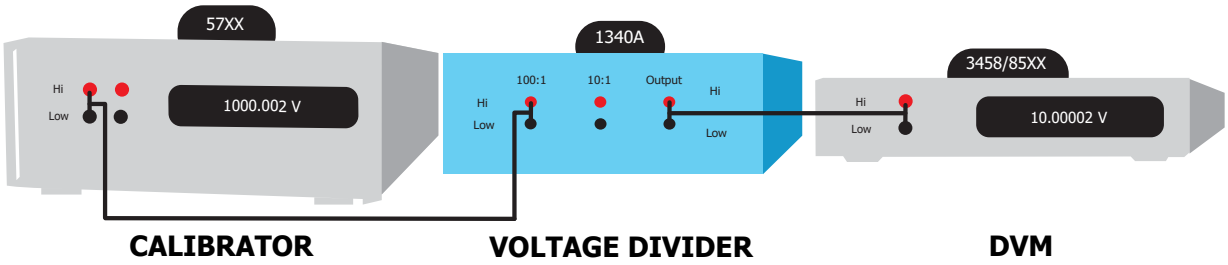
MODEL 1340A

- Sub-ppm Ratio Uncertainties
- 10:1 and 100:1 Divider Outputs
- Voltages to 1000 Volts
- Maintained in Temperature-Controlled Chamber for Optimal Performance
- Built for DC Voltage Characterization of Calibrators and DVM's
- Ratio Uncertainty 0.2 µV/V and 0.4 µV/V
- Output Compared to 732B/C 10 V Output
- No Self-Alignment Required

MODEL 1340A HIGH PRECISION VOLTAGE DIVIDER

The MI model 1340A was designed to provide customers with a user-friendly, cost-efficient reference divider to be used in the DC Voltage characterization of DVM's and calibrators. Procedures are supplied with units and follow the manufactures guidelines for calibration and verification. Customers do not need to calibrate or run a long self-alignment prior to use!

The MI model 1340A was designed and developed by metrologists for metrologists! The ease of use and low cost of the 1340A makes it the ideal choice for use in calibration and maintenance of calibrators. Metrologists and calibration technicians in National Laboratories, the military, and third party calibration laboratories will be greatly impressed with the performance of the 1340A. The 1340A Reference Dividers are precision 100:1 and 10:1 dividers designed primarily for comparing direct voltage levels of various sources to a 10 V voltage reference standard like a 732B or 732C series. Simple connection to the front panel for either the 100:1 or 10:1 ratio is done directly to the calibrator through a supplied cable. The output of the divider is then connected to the DVM for testing also through a supplied cable. **It's that simple!**

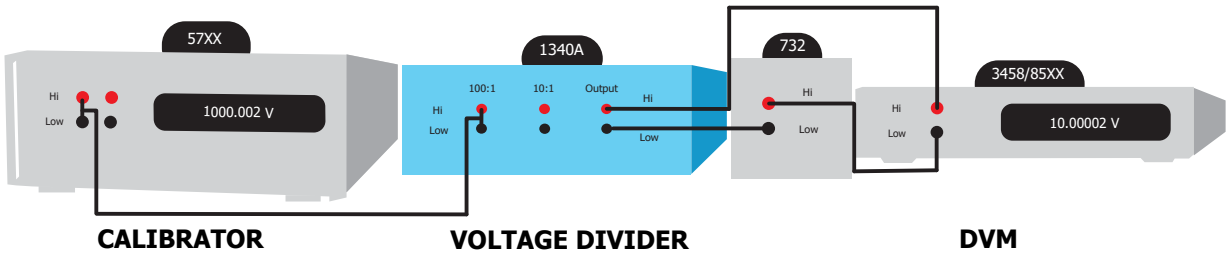


Example: 1000 V in divided to 10 V out to be measured!

The 1340A utilizes a special design network of high precision resistors mounted in a temperature controlled chamber. This allows for the highest level of performance from the internal high precision resistors. Operation was designed to offer customers the easiest to use instrument with complete confidence. An internal mounted temperature sensor PT100 allows users to connect to the front panel and monitor the internal oven.

Null Detector Measurement

The 1340A can be used in a higher resolution mode to achieve the offset of the calibrator under test.



The above diagram illustrates using a 732 10 V reference in the connection sequence. The DVM is then used as a NULL detector to determine the offset of the 57XX series at 1000 V.

No Self Calibration or Self Alignment Required

Simply Your Work, Simply Your Procedures!

With the special resistors and configuration, the 1340A does not require a lengthy or any self-alignment prior to use and removes the need for manual calibration prior to use.

This is an industry leading advancement in the DC voltage divider commercial products.

The model 1340A utilizes MI's history and world leading experience in resistance by a special set of hand-selected resistors to create the divider network. These resistors are housed inside a temperature-controlled chamber that shields it from outside noise and provides a stable temperature for the resistors, improving performance.

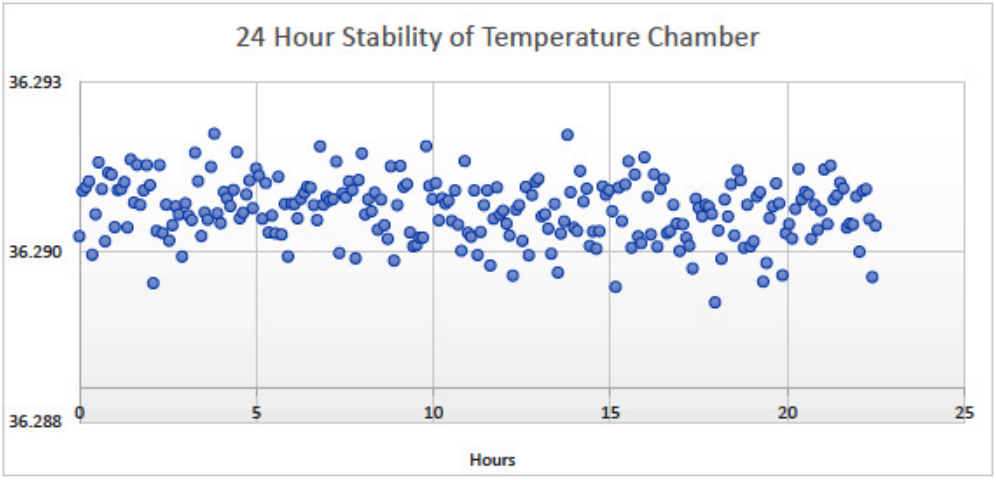


Figure 1: 24 Hour Stability of Temperature Chamber

MODEL 1340A HIGH PRECISION VOLTAGE DIVIDER

Specifications: Rev 0

Ratio Range	Ratio Uncertainty	Input Voltage Max
10:1	± 0.2 µV/V (0.2 ppm)	200 V
100:1	± 0.4 µV/V (0.4 ppm)	1100 V
Temperature Stability		± 0.1 °C Over a 1 Year Period
Ambient Temperature Range		23 °C ± 5 °C
Initial Warm-up Time		24 Hours
Ambient Humidity Range		20 to 90 % Non-condensing
Storage		-50 °C to +50 °C
Power Requirements		100 V to 240 V ± 10 % 50 Hz to 60 Hz ± 5 %
Self-Alignment		Not Required
Isolation to Earth		> 10^{12} Ω
Direct Cable to 57XX		Provided
Warranty		Standard 2 Year Parts & Labour

Options:
PN: 1340-0 Output cable to bare ends
PN: 1340-C Output cable to custom

Other: Contact MI

Dimensions (L × W × H):
445 × 432 × 127 (mm)

Weight:
9 kg

Shipping Weight:
13 kg

Main Power:
85 to 264 V – 47 to 440 Hz

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Die Kompetenz in der Messtechnik

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