



343A

343A DC Voltage Calibrator

- 0 to 1100V output, 0 to 25 mA
- 0.1 ppm resolution, seven decades
- 20 ppm basic accuracy
- Stability better than 5 ppm/hour, 15 ppm/month

The 343A is a 7-digit instrument with a basic accuracy of 20 ppm and a resolution of 1 μ V on the 10V range.

Cleanliness of the dc output is evident in the combined ripple and noise specifications of 50 μ V rms from the 343A. Short term jitter and other random excursions are almost non-existent, less than 1 ppm.

A simple amplifier/comparator circuit is utilized to establish a convenient, variable, current limiter. Any maximum current output from 1 to 30 mA may be set via a front panel control. In addition to providing for current protection to the load, a failsafe "crowbar" protects the series-pass elements from damage should the total voltage across the elements exceed a safe level.

Specifications

Output Voltage: 0 to 1100V dc

Resolution: 1 μ V on 10V range, 10 μ V on 100V range, 100 μ V on 1000V range

Accuracy, 90 Days

10V Range: $\pm 0.002\%$ of setting or $\pm 0.0002\%$ of range*

100V Range: $\pm 0.002\%$ of setting or $\pm 0.0001\%$ of range*

1000V Range: Same as 100V range

*Whichever is greater

NOTE: The above accuracies are absolute, relative to NBS standards, and include effects of stability, line regulation, load regulation, and calibration uncertainties under standard reference conditions of 23°C \pm 1°C and up to 70% relative humidity after 30 minute warm-up. Apply for 90 days.

Stability: $\pm\%$ of Setting or \pm Microvolts*

Time	10V Range	100V Range	1000V Range
Per Hour	0.0005% or 5 μ V	0.0005% or 10 μ V	0.0005% or 20 μ V
Per Month	0.0015% or 15 μ V	0.0015% or 25 μ V	0.0015% or 50 μ V
Per 6 Mo.	0.0025% or 30 μ V	0.0025% or 40 μ V	0.0025% or 60 μ V

*Whichever is greater

Temperature Coefficient: $\pm(3$ ppm of setting $+0.1$ ppm of range $+2$ μ V) per degree Celsius from 22°C to 15°C or 25°C to 35°C

Regulation: $<0.0005\%$ of setting $+25$ μ V for a 10% line voltage change or a full-load to no-load change

Isolation: May be floated 500V dc from chassis

Settling Time: Within 15 ppm of final output in 5 seconds

Overcurrent Protection: Automatically limits output current at any preset level between 1 mA and 30 mA via continuously variable front panel control. Panel lamp illuminates during limiting

Meter: Switch-selectable to full range voltage or full range current

Remote Sense: Separate terminals are provided for sensing the output voltage directly at the load

Temperature: 0°C to 50°C, operating

Power: 115 or 230V ac $\pm 10\%$, 50 to 440 Hz, approximately 60 VA fully loaded

Size: 8.9 cm H x 43.2 cm W x 45.7 cm D (3.5 in H x 17 in W x 18 in D)

Weight: 10.43 kg (23 lb)

Included: Instruction Manual

Model

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Accessories (Also see page 230)

MEE-7001 3½" Rack Adapter

MEE-8078 18" Rack Slides for rack adapter

MEE-8079 24" Rack Slides for rack adapter