Programmable Precision DC Voltage Calibrator

Performance That Leads The Way

- "Cover-on" Automatic Calibration
- 100% Over-Range
- Automatic Bi-polar Output
- 200mV Full Scale Divided Output Range
- All Outputs available through 2 Terminals
- Front and Rear Terminals
- 25mA Current Sourcing All Active Range
- micro-Processor Enhanced Reliability
- 5 Voltage Ranges (200mV through 1200V)
- Illuminated High Voltage Warning
- 0.5 PPM Resolution

The 2701C Programmable Precision DC voltage Calibrator utilizes innovative technology to deliver ultra-precision, ultra-stable DC Voltage from 100nV to 1200V. Designed to meet the most critical calibration laboratory requirements, the 2701C is at home on the production line or in the field. The 2701C offers unmatched user convenience for system installation.

To start with, all output stimuli are available from two terminals on the front and rear panels, so once you've plugged in there's no fumbling around to get to separate divider or high voltage connector. Also, if remote sensing is required a touch of a button engages the 4-wire output mode. The digital attenuator is the design key to long term stability, reliability and interfaceability. Because the crystal controlled attenuator is digital, it can't drift like the conventional Kelvin Varley divider approach. Also, the switch contact resistance no longer becomes a maintenance headache as it is removed from the accuracy determining circuit.

The 2701C have a built-in kilovolt amplifier that delivers up to 1200.000 volts with a full 25mA drive current capability. The 2701C is also short-circuit damage proof on all ranges, and features a 200mV divided output range with 100nV resolution.

Range	Accuracy PPM of Setting ± RNG Noise		Noise 0.1 to 10Hz	24Hr Stability DC to 0.2Hz	Temp. Coefficient PPM of Setting + V/1°C	Output Settling Time		
	From Factory	One Year				0.5 Sec.	1 Sec.	10 Sec.
200mV	± 20 ppm ± 1µV	± 30 ppm ± 2µV	1µV	1µV	2.5 ppm + 0.1	20 ppm	5 ppm	1 ppm
2V	± 15 ppm ± 4µV	± 25 ppm ± 6µV	2µV	± 0.5 ppm ± 2µV	1.5 ppm + 0.6	20 ppm	5 ppm	1 ppm
20V	± 13 ppm ± 13µV	± 22 ppm ± 50µV	15µV	± 0.5 ppm ± 10µV	1.5 ppm + 6	20 ppm	5 ppm	1 ppm
120V	± 14 ppm ± 250µV	± 23 ppm ± 400µV	150µV	± 0.5 ppm ± 100µV	1.5 ppm + 30	30 ppm	7 ppm	2 ppm
1200V	± 15 ppm ± 2.5mV	± 24 ppm ± 4V	1.5mV	± 0.5 ppm ± 1mV	1.5 ppm + 300	50 ppm	10 ppm	5 ppm

Range	Resolution	Max Current	Wideband Noise	Linearity	Output Impedance
200mV	100nV	---	25µV$_{RMS}$	± 0.5µV	450Ω
2V	1µV	25mA	80µV$_{RMS}$	± 1µV ± 4ppm/sett	< 1mΩ
20V	10µV	25mA	130µV$_{RMS}$	± 10µV ± 4ppm/sett	< 5mΩ
120V	100µV	25mA	500µV$_{RMS}$	± 100µV	< 50mΩ
1200V	1mV	25mA	800µV$_{RMS}$	± 1mV	< 500mΩ

General Specifications

Warm-Up Time: 15 Sec to within 15ppm/30 min to rated specs

Power

Power Requirements: 115VAC/230VAC ±10% at 45 to 60Hz at 80VA

Temperature

Operating Temp. Range: 0°C to 50°C
Storage Temp. Range: -30°C to 70°C
Humidity: 70% RH max @ 40°C (non-condensing)

Physical Specifications

Width|Depth|Height: 17" / 43cm | 17" / 43cm | 3.5" / 9cm
Weight: 24lbs / 11kg net;

Accessories

SL-48	Low Thermal EMF Lead Set
GP-1	1 meter GPIB Cable
GP-2	2 meter GPIB Cable
BBL	Dual Banana to Dual Banana lead set
RX-3	19" Rack Mount Adaptor

Options

TL-3	GPIB Interface w/IRP