

Model 2500A/2501A

Precision AC Divider



- 120 to 1,000,000 Volts
- Outputs of 120 & 1V AC
- Loss Measurement Systems
- Power Calibration Systems
- IEEE488 Interface
- Division Accuracy < 20 PPM
- Calibration Period 3 to 5 years

MODEL INFORMATION

The model 2500A is the low voltage arm of a high voltage capacitive divider. Based on the compensated current-comparator capacitive divider principle, it provides ultra precise ratio division of high AC voltages down to workable levels. The model 2500A also provides an easy means of interfacing directly to precision wattmeter (2010A) for direct measurements of transformer losses under control of the IEEE488 interface.

The model 2500A will accept inputs up to 10mA. Several ranges kV of 100, 50, 20, 10, 5, 1 & 1 are also built in to allow flexibility for various input voltages. On range 1 the full scale input is 120 kV, through a 100 pF low-loss high voltage standard capacitor while range 100 offers a full scale input of 1200 volts. The full scale output is 120 volts.

The model 2501A will also accept inputs up to 10mA but it's maximum input voltage is 2400 volts. The gain stages are set for inputs of 2400, 1200, 600, 480, 360, 240 and 120 volts.

Both models are front panel and IEEE488 controllable. The two LCD displays monitor the null and output of the divider. The divider is housed in a rack mounted enclosure and is fully protected against transients. All connections are made to the rear of the instrument.

The model 2500A compares the current through the high voltage capacitor to a low voltage standard capacitor connected to the feed-back circuit of the current comparator. The current comparator automatically corrects for any phase and magnitude errors. The divider output is determined solely by the capacitance ratio of the two standard capacitors. Recommended calibration for the 2500A is 3 to 5 years.

Specifications:

2500A

Input Capacitor 100 pF	Input Voltage: 100, 50, 20, 10, 5, 2, 1 kV
	Output Voltage: 100 Volts
Input Capacitor 50 pF	Input Voltage: 200, 100, 50, 20, 10, 5, 2 kV
	Output Voltage: 100 Volts
Input Capacitor 33 pF	Input Voltage: 1000, 500, 200, 100, 50, 20, 10 kV
	Output Voltage: 100 Volts

2501A

Input Capacitor 1000 pF	Input Voltage: 2400, 1200, 600, 480, 360, 240, 120 V
	Output Voltage: 120 Volts

Other input and output voltages are available, consult factory

General

Maximum Primary Output Voltage	120 VAC RMS with 10% Over Range
Division Ratio Uncertainty 50 – 60Hz	Magnitude <20 ppm Quadrature <20 ppm
Optional: Secondary Output Voltage (max)	1 VAC RMS with 10% Over Range
Division Ratio Uncertainty 50 – 60Hz	Magnitude <50 ppm Quadrature <50 ppm
Frequency Range of Measured Values	40 Hz to 3 kHz
Range kV	100, 50, 20, 10, 5, 2, 1
Warm Up Time	30 Minutes to Full Rated Accuracy
Operating Environment	18 to 34°C, 10 to 80% RH

Dimensions: 221 x 482 x 584 mm **Weight:** 18 kg **Shipping Weight:** 22 kg
Accessories: Standard Capacitors **Operating Power:** 100, 120, 220, 240V - 50/60 Hz

Distributed By:

How to Order:

Model 2500A - High Voltage Divider
 Model 2501A - High Voltage Divider

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