

Model 2500/2501A

Precision AC Divider



- 120 to 1,000,000 Volts
- Outputs of 120 & 1V AC
- Loss Measurement Systems
- Reactor Calibration Systems
- Calibration of other AC Dividers
- Division Accuracy < 20 PPM
- IEEE488 Interface

MODEL INFORMATION

The model 2500 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 2500 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 2500 will accept inputs up to 3.7mA. Several ranges 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 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 2500 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 2500 is 3 to 5 years.

Specifications:

2500A

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

2500B

Input Capacitor 100 pF	Output Voltage: 120 Volts	Input Voltage: 500, 250, 100, 50, 20, 10, 5kV
Input Capacitor 50 pF	Output Voltage: 120 Volts	Input Voltage: 1000, 500, 200, 100, 50, 20, 10kV

2501A

Input Capacitor 1000 pF	Output Voltage: 120 Volts	Input Voltage: 2400, 1200, 600, 480, 360, 240, 120 V
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Other input and output voltages are available, consult factory

General

Maximum Input Current:	10mA
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
Operating Power:	100, 120, 220, 240V - 50/60 Hz
Dimensions:	221 x 482 x 584 mm
Weight: (Shipping)	18 kg (22 kg)
Warranty	1 Year Parts & Labor

Accessories: Standard Capacitors

How to Order:

2500A - High Voltage Divider

2500B - High Voltage Divider

2501A - High Voltage Divider

Distributed By:

Form MI 66, Rev. 6, Dated 09-0-03 (QAP19, App. "N")

Data Subject to Change - Rev 1, 6/09

MI-Canada

Measurements International Ltd
PO Box 2359, 118 Commerce Drive
Prescott, Ontario, Canada K0E 1T0

Toll Free: 1-800-324-4988

Phone: (613) 925-5934
Fax: (613) 925-1195
Email: sales@mintl.com

MI-USA

Measurements International Inc.
815 Eyrie Dr Unit #4
Oviedo, FL 32765

Toll Free: 1-866-684-6393

Phone: (407) 706-0328
Fax: (407) 706-0318
Email: sales@mintl.com

MI-Europe

Druzstevni 845
686 05 Uherske Hradiste
Czech Republic

Phone: (420) 572 572 801
Fax: (420) 572 572 358
Email: sales@mintl.com

www.mintl.com

