

MODEL 2020A



- Power Analyzer
- Basic Power Accuracy < 0.003%
- 5A Current input with 10 Current Ranges
- 240/120V Voltage Input
- Line and Line to Line Voltage Measurements
- Full Power Factor Range
- Distorted Waveforms

MODEL INFORMATION

The 2020A is the latest development from Measurements International. It represents a new sampling method for the precise measurement of electrical power for applications including R&D, product efficiency testing, transformer testing and other power conversion products. Developed as a power analyzer, it has a basic power accuracy of 0.003% as a self-contained standard or in a transformer loss measurement system.

The 2020A is based on the principle of digital sampling. It provides reliable, accurate traceability to NRCC and other National Laboratories around the world. Versatile measurement ranges insure the 2020A is operated at full scale with accuracies of less than 30 PPM. Measurements can be made quickly, accurately and automatically, regardless of distorted waveforms or low power factor conditions.

A large touch screen display is used to change the input parameters and for indicating the voltage, current and power measurements simultaneously. Waveforms of the input voltage and current can also be displayed and saved to a USB Stick on the front panel or transferred to a computer over the LAN. An Rs232 interface is standard and an Optional IEEE-GPIB card is available. With the IEEE Card only the Voltage, Current and Power values can be transferred. Waveform data is transferred over the LAN.

The 2020A can be used to measure line to ground and line to line voltage measurements that are 120° apart with one current input. The current input is a two-stage-compensated current-transformer with 10 current ranges from 5A down to 5 mA, the voltage input consists of an accurate voltage divider with 120V and 240V ranges.

Both automatic and manual ranging of the current and voltages inputs can be performed. Each voltage input consist of two voltage ranges of 120 and 240 volts and 10 current ranges from 5 mA to 5 amps. For Voltage extension the Model 2501A Active Voltage Divider can be used up to 2400 volts or the Model 2500A High Voltage Active Divider can be used to extend the range to 200 kV and higher. Measurements International's Model 7020H can be used to extend the current range up to 4000 amperes.

The displayed output for power is expressed as $VI \cos\phi$. The measurement accuracy's is <30 PPM for all power factors. The relative conversion error of the output is linear and does not depend on the magnitude or distortion of the input signals.

Specifications:

Frequency Range	15 - 400 Hz
Voltage 1 Input & Ranges (Line to Ground)	0 - 120 VAC RMS Max 135 120 – 240 VAC RMS Max 270
Option Voltage 2 Input & Ranges (Line to Ground)	0 - 120 VAC RMS Max 135 120 – 240 VAC RMS Max 270
Input Impedance	120V Range - 500K Ohms 240V Range - 1M Ohms
Current Input & Ranges Compensated Current Transformer	0.005, 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5, Amps AC RMS, Maximum Input - 1.2 x Range Input Impedance < 3.5 Ohms/Range Isolation - 600V P-P
Display	Watts: ± 30 ppm Volts: < 20 ppm Current: < 20 ppm
Computer Communication	LAN, RS232 (Optional GPIB)
Linearity (100% to 10% of each range)	< 20 ppm of Full Scale
Temperature Coefficient	2 ppm/°C
Operating Environment	15 to 40 °C, 10 to 80% RH
Warranty	1 Year Parts & Labor

Dimensions:

175 x 440 x 380 mm

Weight:

15 kg

Shipping Weight:

20 kg

Accessories:

7020H Current Transformer
2501A High Voltage Divider

Operating Power:

100, 120, 220, 240 Volts - 50/60 Hz

Disributed By:

How to Order:

Model: 2020A – Power Analyzer (Line to ground)

Model: 2020A – Power Analyzer (Line to Line)

(2nd voltage input)

Model: 2020A – GPIB (Note VI and Power)

Model: 2020CAL – STD or

Model: 2020CAL - 17025

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