

>368,688789 12437,23-2933 977 56-203 88849<
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>198,65546 65612,23-2829 955 56-203 46549<
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>458,11142 83417,73-2037 876 56-203 83339<
>145,523286 64486,22-2889 966 56-203 88849<
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DATA SHEET

MODEL 2701A



Transconductance Amplifier

- Resistive, Capacitive, Inductive Loads
- 0 to 100 Amps - AC
- 0 to ± 100 Amps - DC
- Voltage Compliance ± 5 Volts
- IEEE488 Interface

MODEL INFORMATION

The Model 2701A was originally developed for use in the Model 2100 series of Power Calibration and DC Resistance Measurement Systems. Fully programmable, the Model 2701A can be configured as part of a fully automatic current calibration system to optimize throughput and will drive resistive, capacitive and inductive loads.

When used as a Transconductance amplifier, the Model 2701A converts a voltage signal applied to the input, into a high resolution output current whose value is directly proportional to the input signal level. It has three ranges of 5, 20, and 100 amps.

In the DC or source mode, the Model 2701A is bipolar. The source voltage can be selected from the front panel or over the IEEE 488 interface. The DC voltage is generated from a 16 bit DAC. The Model 2701A uses quick-disconnect high current female terminals for the DC output connections.

Outputs of 100 amps can be produced over a frequency range of DC to 1000 Hz. Distortion is specified at less than 0.1% total, with reference to the fundamental of the signal frequency.

A large vacuum florescent display indicates both source and amplifier modes. These modes are selected using the front panel keyboard. In the source or DC mode, the current selected is displayed.

The Model 2701A is rack mountable in a standard 433 mm case. The outputs for the Model 2701A are located on the rear of the instrument. There are two separate outputs provided for AC, five way binding posts up to 20 amps and quick-disconnect high current female terminals from 20 to 100 amps.

Applications for the Model 2701A include measurements systems such Model 6010-100A Resistance Measurement System and Model 2100A and Model 2100B Power Calibrations Systems. Other applications include the high current CCC being developed in many of the national laboratories.



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 >145,523286 64486,22-2689 986 56-203 88849<
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Specifications:

AC Operation		DC Operation	
Ranges	0 to 100 Amps @ 25 Siemens 0 to 20 Amps @ 4 Siemens 0 to 5 Amps @ 1 Siemens	Ranges	0 to ±5 Amps 5 to ±20 Amps 20 to ±100 Amps
Ratio of Input Voltage to Output Current	All Ranges 5 volts for FS Output	Resolution	16 Bits
Voltage Compliance	5A, 20A range = 5V RMS 100A range = 4V RMS	Voltage Compliance	5A, 20A range = ± 5V 100A range = ± 4V
Output Stability	± 100 ppm for 8 Hours	Output Stability	± 100 ppm + 1 Bit for 8 Hr.
DC Offset	< 5 mA	DC Offset	< 5 mA
Harmonic Distortion	<0.1% of the Fundamental at 100A RMS	Noise	< 1.5mA + 0.04% Output
Bandwidth	DC to 1kHz		DC
Input Terminals	5 Way Binding Posts		
Output Terminals	Quick Disconnect		
Product Details			
Operating Power	100, 120, 220, 240V - 50/60 Hz		
Operating Environment	18 to 34°C, 10 to 80% RH		
Dimensions	545 x 435 x 221 mm		
Weight	32 kg		
Shipping Weight	40 kg		
Warranty	1 Year Parts & Labor		

Data Subject to Change-Revision 5

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