Applied Test Resources

PM0820

Multiple (8) Four Quadrant Power Source

The PM0820 consists of eight fully independent four-quadrant power sources capable of supplying up to 20 V/100 mA each.

The PM0820 uses an onboard controller, which relieves the system CPU of performing many functions necessary for the module operation. The result is higher efficiency of the CPU and faster execution of the module commands. All measurements use the "Zero Time Average" (ZTA) circuit (patent pending) that allows for a measurement time of less then 250 us to the full 16-bit resolution. ZTA enables the PM0820 to obtain the repeatability of using 20 to 50 measurements and averaging the results, with a single measurement.

The PM0820 implements a calibration method called Hardware Error Correction (HEC) (patent pending). This method performs a full calibration, correcting errors for every code, as opposed to the more traditional two-point calibration of offset and gain correction. This method uses no CPU time, which accelerates the forcing and measurement functions.

SPECIFICATIONS

Force Mode Specifications*		**Measure Mode Specifications***	
Maximum Output Voltage	±20 V	Maximum Voltage	±20 V
Maximum Output Current	100 mA	Maximum Current	100 mA
Maximum Power Dissipation	2 W on Each Output	Input Impedance	1 Meg Minimum
Programming Resolution	14 Bits	Measure Resolution	16 Bits
Current Ranges	1 mA	Current Ranges	1 mA
	100 mA		100 mA
Voltage Ranges	2 V	Voltage Ranges	2 V
	20 V		20 V
Accuracy		**Accuracy**	
Current	±(0.1% of Range + 300 nA)	Current	±(0.1% of Range + 300 nA)
Voltage	±(0.05% of Range + 500 uV)	Voltage	±(0.05% of Range + 500 uV)
Settling Time	<1 ms	Acquisition Time	250 us
Range Change Time	5 ms	Range Change Time	5 ms
Programming Time	20 us	Programming Time	20 us
Connect Time	5 ms	Connect Time	5 ms

*All specifications are subject to change without notice.
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