



Applied Test Resources

PM1000 High Voltage Power Source

The PM1000 is a high voltage power source capable of supplying up to 1000 V/20 mA to a load. It is intended for use in measuring leakage and breakdown voltages of devices. There are five voltage ranges and five current ranges.

The PM1000 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 than 250 us to the full 16-bit resolution. ZTA enables the PM1000 to obtain the repeatability of using 20 to 50 measurements and averaging the results, with a single measurement.

The PM1000 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 | 1000 V | Maximum Voltage | 1000 V |
| Maximum Output Current | 0.02 Amps | Maximum Current | 0.02 Amps |
| Programming Resolution | 14 Bits | Measure Resolution | 16 Bits |
| 10 Volt Range | ± 0.05% | Current Ranges | 2 uA ±0.2% |
| 50 Volt Range | ± 0.05% | | 20 uA, ±0.2% |
| 100 Volt Range | ± 0.05% | | 200uA, ±0.2% |
| 500 Volt Range | ± 0.05% | | 2 mA, ±0.2% |
| 1000 Volt Range | ± 0.05% | | 20 mA, ±0.2% |
| | | Voltage Ranges | 10 V, ±0.2% |
| | | | 50 V, ±0.2% |
| | | | 100V, ±0.2% |
| | | | 500V, ±0.2% |
| | | | 1000 V, ±0.2% |

*All specifications are subject to change without notice.
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