### Piezoelectric Tests

<table>
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<th>Range</th>
<th>Description</th>
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| d33 – Very High Range | - d33 range: 100 to 10,000 pC/N  
- Accuracy: ± 2% ± 1 pC/N  
- Loading: 1.0uF |
| d33 – High Range     | - d33 range: 10 to 1,000 pC/N  
- Accuracy: ± 2% ± 0.1 pC/N  
- Loading: 1.0uF |
| d33 – Low Range      | - d33 range: 0 to 10 pC/N  
- Accuracy: ± 2% ± 0.01 pC/N  
- Loading: 0.1uF |
| d33 & d31            | Adapters are available for various sample geometries, and supplied separately. |

### General Operation

#### Response Time
- Typically 5 seconds to achieve 1% of final reading.

#### Sample Size
- Maximum dimensions:
  - 50 mm in polarisation direction.
  - 68 mm perpendicular (i.e. maximum diameter of a symmetrically supported disc is 136 mm)

#### Calibration
- The system is supplied fully calibrated and tested. d33 calibration may be checked using the reference sample provided. In normal use, recalibration is recommended annually.
- Calibration may be carried out to customer supplied reference samples using the remote interface.

### Data Storage
- The standard PM200 will store up to 100 measurements. All results are numbered and stored along with the test frequency and the measurement range in use.
- Data is retained when the PiezoMeter is switched off.

### Stand-Alone Operation
- 40 character by 4 line alphanumeric liquid crystal display showing sample number, d33, test frequency and operation mode.
- Simple key pad to control all PiezoMeter functions for stand-alone operation.
- Printing facility when used directly with standard PC printer, providing tabulated output and statistical analysis.

### Remote Operation
- The PiezoMeter may be controlled by a computer, equipped with Windows 98, Windows 2000, or Windows XP. A free serial port is required. All PiezoMeter functions may be controlled. Remote control software for Windows, supplied separately, also allows real-time calculation of $e_{33}$, $g_{33}$ and $g_{31}$ using sample dimensions supplied by the user.

### Remote Interface
- Industry standard RS-232C interface, configured as data terminal equipment (DTE) using 9 pin D-connector.
- RS-232 parameters: 9600 baud, 1 stop bit, no parity.
- Connection is by a standard PC serial file transfer cable (supplied).

### Printer Interface
- Industry standard parallel printer interface, using 25 pin D-connector, configured as for a standard PC.
- Connection is by a standard PC printer cable (supplied).

### Power supply
- 220-240V a.c. 50-60Hz 0.5A or 110-120V a.c. 50-60Hz 1A (Specify with order).

### Temperature Limits
- Storage: 0°C to 50°C
- Operating: 10°C to 40°C
- System calibrated at 20°C

### Physical dimensions
- Electronics unit: 350 x 230 x 90 mm.
- Force unit: 145 x 150 x 175 mm.
- Total Unpacked Weight: Approx. 13 Kg.
- Total Packed Weight: Approx. 20kg.

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For more details, or to arrange a demonstration, contact:

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Specification correct at 1st January 2013. Piezotest reserves the right to change specifications without notice when necessary.