

### 3M™ 711 Charge Analyzer Properties

| Property                                | Typical Values   |
|---|--|
| Dimensions                              | Base unit: (152 x 152 x 152) mm, (6 x 6 x 6) inches  |
| Weight                                  | 1.6 kg (3.53 lbs.)   |
| High Voltage Power Supply (internal)    | > 1100 V positive or negative (current limiting resistor: 10 M $\Omega$ )  |
| Low Voltage Power Supplies              | Built-in NiMH-rechargeable batteries, 1400 mAh<br>AC/DC Adapter: secondary side, DC 12 V/500 mA                          |
| Operating Time (rechargeable batteries) | 4 hours (approximately) with full charge   |
| Storage Memory Capacity                 | 128 k EEPROM (e.g. sufficient for approximately 100 CPM-measurements)  |
| Response Time                           | 0 to 100 % $\approx$ 100 ms  |
| Impedance                               | 1015 $\Omega$ (Teflon-separators cleaned)  |
| Accuracy                                | $\pm$ 2.5% of range end value (digitized)<br>$\pm$ 5% for the analog output  |
| Operating Functions                     | CPM (positive/negative/automatic), voltmeter and fieldmeter  |
| Interfaces                              | Analog output $\pm$ 2 V ( $\pm$ 1 V, in 500 V range for voltmeter), serial PC-COM, and external field sensor type 711 RS |
| Displays                                | Two, 11-segment positive & negative LED-bar charge indicators<br>16-digit alphanumeric dual row LCD                      |
| Settings – CPM Operating Function       | Starting voltage: 600 V – 1200 V in 1 V-steps<br>Stop voltage: 1 V – 500 V in 1 V-steps (in decimal mode)                |
| Static Decay Time                       | 0.1 seconds – 99.9 seconds   |
| Offset-Voltage Time                     | 1 – 10 seconds in 1 second steps and 10 – 60 seconds in 10 seconds steps   |
| Voltmeter Operating Function            | Ranges: 25 V, 100 V, 500 V, 1.0 kV, 5.0 kV and auto range  |
| Fieldmeter Operating Function           | Ranges: Manual 1.25 kV/m, 5 kV/m, 25 kV/m, 50 kV/m, 250 kV/m, and automatic  |
| Plate Electrode                         | VA-steel (152 x 152) mm/(6 x 6) inches, removable, capacitance (20 $\pm$ 2) pF   |
| Cup Electrode                           | Gold-plated electrode with 4mm-banana socket, for voltage measurements   |
| Selection of Operating Function         | Pre-setting is "FIELDMETER", additional automatic settings by applying the plate or cup electrode                        |
| Operating Temp.                         | 32°F to 113°F (0 - 45°C)   |
| Humidity                                | Maximum 60%<br>Note: At high relative humidity, charge leakage may occur affecting the decay time measurement            |
| Storage Temperature                     | -22°F to 140°F (-30 - 60°C)  |
| Declaration of Conformity               | EN 60204-1/85<br>EN 60204-1/91<br>EN 61010 (SAFETY)<br>EN 50082-1<br>EN 50082-2  |