

## MultiPro™ Series Professional MultiMeters

### High Performance Autoranging Digital MultiMeters with RS-232 PC Interface

#### Features:

- High basic DC Voltage accuracy of 0.08%
- Wide AC Voltage bandwidth of 40Hz to 20kHz
- Rugged design with protective holster and water resistant housing
- Optically isolated RS-232 PC interface with Windows® 95/98/NT/2000/ME/XP compatible software (optional) allows user to collect, display, plot, save or export data or graphs
- Backlit 5000 count LCD display for high resolution (0.01mV, 0.1µA, 0.01Ω, 0.01nF, 0.001Hz)
- Smart auto power off is disabled if signal is present at test leads
- Hold and low resistance auto-lead zero
- Measurement functions include AC/DC Voltage and Current, Resistance, Frequency, Capacitance, Diode and Continuity
- Complete with built-in stand, CAT. III test leads, protective holster, 9V battery and temperature probe for MP530



**Model MP510**  
• 0.08% Basic DC Accuracy



**Additional Features Model MP520:**  
• True RMS measurements for AC Voltage and Current



**Additional Features Model MP530:**  
• True RMS measurements for AC Voltage and Current  
• °F/°C Temperature function  
• Relative, Min, Max, Max-Min and 5ms Peak hold  
• Analog bargraph Zoom provides 5x resolution to detect small signals (updates 60/sec)



CAT IV - 600V

| Specifications            | Range  | Max. Resolution | Basic Accuracy (%rdg+digits)    |
|---------------------------|--|-----------------|---------------------------------|
| DC/AC Voltage:            | 50mV, 500mV, 5V, 50V, 500V, 1000V                      | 0.01mV          | ±(0.08%+2d) DC<br>±(0.5%+3d) AC |
| DC/AC Current:            | 500µA, 5000µA, 50mA, 500mA, 5A, 10A                    | 0.1µA           | ±(0.2%+4d) DC<br>±(0.6%+3d) AC  |
| Resistance (Ω):           | 50, 500k, 5k, 50k, 500k, 5M, 50M                       | 0.01Ω           | ±(0.1%+2d)                      |
| Capacitance:              | 50nF, 500nF, 5µF, 50µF, 500µF, 9999µF                  | 0.01nF          | ±(0.8%+3d)                      |
| Frequency:                | 0.001Hz to 125kHz                                      | 0.001Hz         | ±(0.01%+2d)                     |
| Temperature: (MP530 only) | -58 to 1832°F (-50 to 1000°C)                          | 1°F/°C          | ±(0.3%+3d)                      |
| Dimensions/ Wt:           | 7.32 x 3.42 x 1.39" (186 x 87x 35.5mm) / 0.75lb (340g) |                 |                                 |



All models include Double injection molded CAT. III - 1000V Test Leads for safety, better grip and added durability.

#### Applications:

- True RMS is ideal for voltage and current measurements of distorted waveforms in office and industrial locations
- Wide bandwidth for audio frequency and digital electronic production test and repair
- Monitor, display and store data using the optional PC software

#### Ordering Information:

- MP510.....MultiPro™ Professional MultiMeter
- MP510-NIST.....MultiPro™ Professional MultiMeter with NIST Certificate
- MP520.....MultiPro™ True RMS Professional MultiMeter
- MP520-NIST.....MultiPro™ True RMS Professional MultiMeter with NIST Certificate
- MP530.....MultiPro™ True RMS Professional MultiMeter w/ Temp
- MP530-NIST.....MultiPro™ True RMS Professional MultiMeter w/ Temp
- SW800.....MultiPro™ Software Diskette and RS-232 Cable
- TP872.....Spare bead wire Temperature Probe
- TL805.....Spare set of CAT. III - 1000V Test Leads
- TL807.....Set of Alligator Clips (2pk)
- CA899.....Vinyl Pouch Carrying Case
- FS880.....Spare Fuse

# MultiPro™ Series Professional MultiMeters

High Performance Autoranging Digital MultiMeters with RS-232 PC Interface

| FUNCTION                     | RANGE  | ACCURACY (% rdg + digits) | NOTES  |                          |
|------------------------------|--|---------------------------|--|--------------------------|
| DC Voltage:                  | 50.00mV  | ±(0.12% + 2d)             | Input Impedance: 10MΩ<br>Input protection; V;1050Vrms, mV; 600VDC/AC   |                          |
|                              | 500.0mV  | ±(0.06% + 2d)             |  |                          |
|                              | 5.000V   | ±(0.08% + 2d)             |  |                          |
|                              | 50.00V   | ±(0.08% + 2d)             |  |                          |
|                              | 500.0V   | ±(0.08% + 2d)             |  |                          |
|                              | 1000V  | ±(0.08% + 2d)             |  |                          |
| AC Voltage:                  | 50.00mV  | ±(0.5% + 3d)              | Input Impedance: 10MΩ<br>Stated specification at 50/60Hz (wider specs at 40Hz to 20kHz)<br>True RMS (MP520 &530)<br>Input protection; V;1050Vrms, mV; 600VDC/AC  |                          |
|                              | 500.0mV  | ±(0.5% + 3d)              |  |                          |
|                              | 5.000V   | ±(0.5% + 3d)              |  |                          |
|                              | 50.00V   | ±(0.5% + 3d)              |  |                          |
|                              | 500.0V   | ±(0.5% + 3d)              |  |                          |
|                              | 1000V  | ±(0.5% + 3d)              |  |                          |
| DC Current:                  | 500.0µA  | ±(0.2% + 4d)              | Burden voltage; 0.15mV/µA, 3.3mV/mA, 0.03V/A<br>On 10A range, 20A for 30 seconds with 5 minute cool down<br>Input protection; µA/mA 1A/240V fuse, A 13A/240V fuse  |                          |
|                              | 5000µA   | ±(0.2% + 4d)              |  |                          |
|                              | 50.00mA  | ±(0.2% + 4d)              |  |                          |
|                              | 500.0mA  | ±(0.2% + 4d)              |  |                          |
|                              | 5.000A   | ±(0.2% + 4d)              |  |                          |
|                              | 10.00A   | ±(0.2% + 4d)              |  |                          |
| AC Current:                  | 500.0µA  | ±(0.6% + 3d)              | Stated specification @ 50/60Hz (wider specs at 40Hz to 1kHz)<br>On 10A range, 20A for 30 seconds with 5 minute cool down<br>True RMS (MP520 &530)<br>Input protection; µA/mA 1A/240V fuse, A 13A/240V fuse |                          |
|                              | 5000µA   | ±(0.6% + 3d)              |  |                          |
|                              | 50.00mA  | ±(0.6% + 3d)              |  |                          |
|                              | 500.0mA  | ±(0.6% + 3d)              |  |                          |
|                              | 5.000A   | ±(0.6% + 3d)              |  |                          |
|                              | 10.00A   | ±(0.6% + 3d)              |  |                          |
| Resistance:                  | 50.00Ω   | ±(0.2% + 6d)              | Open circuit voltage:<1.3VDC<br>(<3VDC on 50Ω &500Ω ranges)<br>Input protection; 600VDC/AC   |                          |
|                              | 500.0Ω   | ±(0.1% + 3d)              |  |                          |
|                              | 5.000kΩ  | ±(0.1% + 2d)              |  |                          |
|                              | 50.00kΩ  | ±(0.1% + 2d)              |  |                          |
|                              | 500.0kΩ  | ±(0.1% + 2d)              |  |                          |
|                              | 5.00MΩ   | ±(0.4% + 3d)              |  |                          |
| 50.00MΩ                      | ±(1.5% + 5d)   |                           |  |                          |
| Capacitance:                 | 50.00nF  | ±(0.8% + 3d)              | Accuracies stated for film capacitors or better<br>Input protection; 600VDC/AC   |                          |
|                              | 500.0nF  | ±(0.8% + 3d)              |  |                          |
|                              | 5.000µF  | ±(1.0% + 3d)              |  |                          |
|                              | 50.00µF  | ±(2.0% + 3d)              |  |                          |
|                              | 500.0µF  | ±(3.5% + 5d)              |  |                          |
|                              | 9999µF   | ±(5.0% + 5d)              |  |                          |
| Temperature:<br>(MP530 only) | -58F to 1832°F   | ±(0.3% + 5d)              | Thermocouple range and accuracy not included   |                          |
|                              | -50 to 1000°C  | ±(0.3% + 3d)              |  |                          |
| Frequency:                   | Function   | Range                     | Sensitivity  | Accuracy (%rdg + digits) |
|                              | mV   | 10Hz to 125kHz            | 300mV  | ±(0.01% + 2d)            |
|                              | 5V   | 10Hz to 125kHz            | 2V   | ±(0.01% + 2d)            |
|                              | 50V  | 10Hz to 20kHz             | 20V  | ±(0.01% + 2d)            |
|                              | 500V   | 10Hz to 1kHz              | 80V  | ±(0.01% + 2d)            |
|                              | 1000V  | 10Hz to 1kHz              | 300V   | ±(0.01% + 2d)            |
|                              | Ω, Cx, diode   | 10Hz to 125kHz            | 300mV  | ±(0.01% + 2d)            |
|                              | µA, mA, A  | 10Hz to 125kHz            | 10%FS  | ±(0.01% + 2d)            |
| Diode test:                  | 2.000V ±(1% + 1digit) Open circuit voltage <3.5V, 0.8mA typical test current |                           |  |                          |
| Continuity:                  | Buzzer sounds between 20Ω and 200Ω, Response time <100µs                     |                           |  |                          |
| Crest Mode:                  | (for V&A) ±150 digits for changes > 5msec in duration                        |                           |  |                          |
| Display:                     | 5000 count LCD with backlighting and bargraph                                |                           |  |                          |
| Update Rate:                 | 5 per second, Bargraph; 60 per second  |                           |  |                          |
| Auto Power Off:              | After 17 minutes inactive  |                           |  |                          |
| Standards:                   | IEC 1010, CAT IV- 600V   |                           |  |                          |
| Operating Temperature:       | 32 to 122°F (0 to 50°C)  |                           |  |                          |
| Storage Temperature:         | -4 to 176°F (-20 to 60°C)  |                           |  |                          |
| Relative Humidity:           | 80% (32 to 95°F/ 0 to 35°C), 70% (95 to 122°F/ 35 to 50°C)                   |                           |  |                          |
| Power Supply:                | 9V alkaline battery  |                           |  |                          |
| Power consumption:           | 2.7mA typical  |                           |  |                          |
| Dimensions:                  | 7.32 x 3.42 x 1.39" (186 x 87 x 35.5mm)                                      |                           |  |                          |
| Weight:                      | 0.75lb (340g)  |                           |  |                          |

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