

CH Product DATASHEET

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, $0.1\mu A$, 0.01, 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 (-58 to 482°F/-50 to 250°C) for MP530



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



Model MP510

• 0.08% Basic DC Accuracy



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)





| Specifications | Range | Max. Resolution | Basic Accuracy (%rdg+digits) | | |
|------------------------------|--|-----------------|---------------------------------|--|--|
| DC/AC Voltage: | 50mV, 500mV, 5V, 50V, 500V, 1000V | 0.01mV | ±(0.08%+2d) DC ±(0.5%+3d) AC | | |
| DC/AC Current: | 500μA, 5000μA, 50mA, 500mA, 5A, 10A | 0.1μΑ | ±(0.2%+4d) DC ±(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.

Ordering Information:

| MP510 | MultiPro™ Professional MultiMeter |
|------------|---|
| MP510-NIST | MultiPro™ 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 |
| | |

TL807Set of Alligator Clips (2pk)
CA899Vinyl Pouch Carrying Case
FS880Spare Fuse



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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 | | | |
| · · · · · · · · · · · · · · · · · · | 500.0mV | ±(0.06% + 2d) | | /;1050Vrms, mV; 600VDC/AC | | |
| | 5.000V | ±(0.08% + 2d) | input protection, v, 1000 vims, mv, 000 v DO/AO | | | |
| | 50.00V | ±(0.08% + 2d) | | | | |
| | 500.0V | ±(0.08% + 2d) | | | | |
| | 1000V | ±(0.08% + 2d) | | | | |
| AC Voltage: | 50.00mV | ±(0.5% + 3d) | Input Impedance: | 10ΜΩ | | |
| | 500.0mV | ±(0.5% + 3d) | | | | |
| | 5.000V | ±(0.5% + 3d) | True RMS (MP530) | | | |
| | 50.00V | ±(0.5% + 3d) | Input protection; V;1050Vrms, mV; 600VDC/AC | | | |
| | 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 | | | |
| | 5000μA | ±(0.2% + 4d) | | A for 30 seconds with 5 minute cool down | | |
| | 50.00mA | ±(0.2% + 4d) | | Input protection; µA/mA 1A/240V fuse, A 13A/240V fuse | | |
| | 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) | | | |
| | 5000μA | ±(0.6% + 3d) | On 10A range, 20A for 30 seconds with 5 minute cool down True RMS (MP530) | | | |
| | 50.00mA | ±(0.6% + 3d) | | | | |
| | 500.0mA | ±(0.6% + 3d) | Input protection; µA/mA 1A/240V fuse, A 13A/240V fuse | | | |
| | 5.000A | ±(0.6% + 3d) | input protootion, promit 170240 v 1000, 71 1070240 v 1000 | | | |
| | 10.00A | ±(0.6% + 3d) | | | | |
| Resistance: | 50.00Ω | ±(0.2% + 6d) | Open circuit voltage:<1.3VDC | | | |
| i iodiotarioo. | 500.0Ω | ±(0.1% + 3d) | | | | |
| | 5.000kΩ | ±(0.1% + 2d) | (<3VDC on 50Ω &500Ω ranges) Input protection; 600VDC/AC | | | |
| | 50.00kΩ | ±(0.1% + 2d) | input protection, 000000/AC | | | |
| | 500.0kΩ | ±(0.1% + 2d) | | | | |
| | 5.00MΩ | ±(0.4% + 3d) | | | | |
| | 50.00MΩ | ±(1.5% + 5d) | | | | |
| Capacitance: | 50.00NF | ±(1.5% + 3d) ±(0.8% + 3d) | Accuracios stated | for film canacitors or hetter | | |
| Оараспансе. | 500.0nF | ±(0.8% + 3d) | | Accuracies stated for film capacitors or better Input protection; 600VDC/AC | | |
| | 5.000μF | ±(1.0% + 3d) | input protection, 600 VDC/AC | | | |
| | 50.00μF | ±(1.0% + 3d) ±(2.0% + 3d) | | | | |
| | 500.0μF | ±(2.5% + 5d) ±(3.5% + 5d) | | | | |
| | 9999μF | ±(5.0% + 5d) | Thermocouple range and accuracy not included | | | |
| Temperature: | -58F to 1832°F | ±(0.3% + 5d) | | | | |
| (MP530 only) | -50 to 1000°C | ±(0.3% + 3d) | mormoodpic rai | igo una accuracy not included | | |
| (Will GOO Offiny) | 00 10 1000 0 | 1(0.070 1 00) | | | | |
| | | | | | | |
| Frequency: | Function | Range | Sensitivity | Accuracy (%rdg + digits) | | |
| requerity. | 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) | | |
| | p. 1, 111/1, 17 | TOTAL TO TECHNIZ | .0,010 | _(0.01/01 Lu) | | |
| | | | | | | |
| Diode test: | 2 000V +(1% + 1digit | t) Open circuit voltage <3.5V 0.8mA tvr | nical test current | | | |
| Continuity: | | 2.000V ±(1% + 1digit) Open circuit voltage <3.5V, 0.8mA typical test current Buzzer sounds between 20Ω and 200Ω, Response time <100µs | | | | |
| Crest Mode: | (for V&A) ±150 digits for changes > 5msec in duration | | | | | |
| Display: | (tot vax) ±100 uigis tot citariges > directions = 1000 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- 6 | | | | | |
| | | | | | | |
| Storage Temperature: | 9: 32 to 122°F (0 to 50°C) | | | | | |
| Relative Humidity: | | | | | | |
| Power Supply: | 80% (32 to 95°F/ 0 to 35°C), 70% (95 to 122°F/ 35 to 50°C) 9V alkaline battery | | | | | |
| Power Supply: Power consumption: | 9V alkaline battery 2.7mA typical | | | | | |
| Dimensions: | 2.7mx typical 7.32 x 3.42 x 1.39" (186 x 87 x 35.5mm) | | | | | |
| Weight: | | 7.52 x 5.42 x 1.53 (166 x 67 x 65.5mm) 0.75lb (340q) | | | | |
| Jigirit. | 5.7 GID (0 10g) | | | | | |