

DIGITAL MULTIMETER



Features:

- DC current to 10A
- Data Hold & Relative function
- Resistance 2000Ω
- Diode check & continuity functions
- Auto power off
- 2000-count LCD display with backlight
- Includes test leads and protective holster

Specifications:

DC Current Range: 10A
 AC/DC Voltage Range: 600V
 Resistance Range: 2000Ω
 Dimensions: 146 x 66 x 42mm (5.75 x 2.6 x 1.65")
 Weight: 200 g (7.0 oz)

Model	Description	Price
ST-201	Digital Multimeter	\$49.00

DIGITAL MULTIMETER



Features:

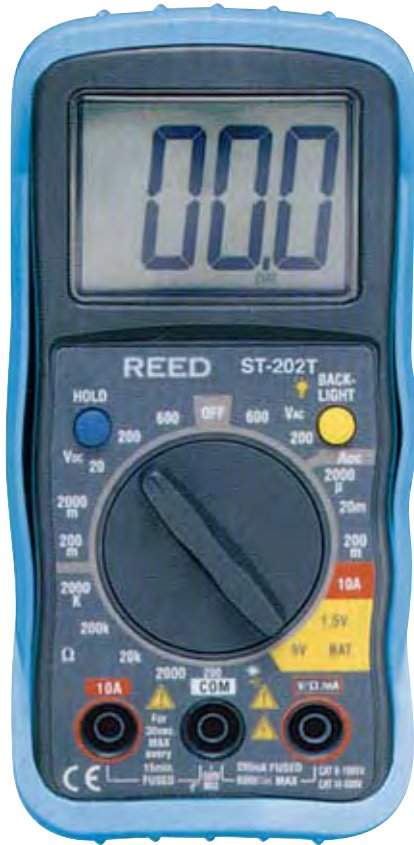
- Temperature function: 760°F/400°C
- AC/DC current to 10A
- Auto & manual ranging
- Data Hold & Relative functions
- Resistance to 40MΩ
- Diode check & continuity functions
- Auto shut off
- 4000-count LCD display with backlight
- Includes test leads and protective holster

Specifications:

AC/DC Current Range: 10A
 AC/DC Voltage Range: 600V
 Resistance Range: 40MΩ
 Capacitance Range: 200μF
 Frequency Range: 9.999MHz
 Temperature Range: Max. 760°F/400°C
 Dimensions: 146 x 66 x 42mm (5.75 x 2.6 x 1.65")
 Weight: 200 g (7.0 oz)

Model	Description	Price
ST-202	Digital Multimeter	\$95.00

DIGITAL MULTIMETER



Features:

- True RMS measurements
- Temperature function: 760°F/400°C
- AC/DC current to 10A
- Auto & manual ranging
- Data Hold & Relative functions
- Resistance to 40MΩ
- Diode check & continuity functions
- Auto shut off
- 4000-count LCD display with backlight
- Includes test leads and protective holster

Specifications:

AC/DC Current Range: 10A
 AC/DC Voltage Range: 600V
 Resistance Range: 40MΩ
 Capacitance Range: 200μF
 Frequency Range: 9.999MHz
 Temperature Range: Max. 760°F/400°C
 Dimensions: 146 x 66 x 42mm (5.75 x 2.6 x 1.65")
 Weight: 200 g (7.0 oz)

Model	Description	Price
ST-202T	Digital Multimeter	\$110.00

DIGITAL MULTIMETER



Features:

- True RMS measurements
- Temperature function: 1832°F/1000°C
- AC/DC current to 10A
- Auto & manual ranging
- Data Hold & auto shut off
- Resistance to 40MΩ
- Diode check & continuity functions
- Audible and visual safety warnings
- High contrast 4000-count LCD display with backlight

Specifications:

AC/DC Current Range: 20A
 AC Voltage Range: 750V
 DC Voltage Range: 1000V
 Resistance Range: 40MΩ
 Continuity Range: 30Ω
 Capacitance Range: 100μF
 Frequency Range: 9.999MHz
 Temperature Range: Max. 1832°F/1000°C
 Dimensions: 197 x 88 x 41mm
 Weight: 635g

Model	Description	Price
ST-9933	Digital Multimeter	\$195.00

DIGITAL MULTIMETER



Features:

- 2000-count, LCD display with backlight
- Full overload protection on all ranges
- Data hold
- Diode check & continuity (30Ω)
- Temperature function to 1400°F/760°C
- Supplied with battery

Specifications:

AC/DC Current Range: 20A
 AC Voltage Range: 700V
 DC Voltage Range: 1000V
 Resistance Range: 20MΩ
 Capacitance Range: 200μF
 Frequency Range: 20kHz
 Diode Test: 2.8V
 Temperature Range: 1400°F/760°C
 Dimensions: 7.6 x 3.6 x 1.5"
 Weight: 13.5 oz

Model	Description	Price
ST-2008	Digital Multimeter	\$95.00

DIGITAL MULTIMETER



Features:

- 4000-count, LCD display with backlight
- Autoranging function
- Full overload protection on all ranges
- Data hold
- Diode check & continuity (30Ω)
- Temperature function to 1400°F/760°C
- Supplied with battery

Specifications:

AC/DC Current Range: 20A
 AC Voltage Range: 700V
 DC Voltage Range: 1000V
 Resistance Range: 40MΩ
 Capacitance Range: 100μF
 Frequency Range: 9.999MHz
 Diode Test: 2.8V
 Temperature Range: 1400°F/760°C
 Dimensions: 7.6 x 3.6 x 1.5"
 Weight: 13.5 oz

Model	Description	Price
ST-2009	Digital Multimeter	\$110.00

VOLTAGE DETECTORS

Features:

- Automatically selects AC voltage, DC voltage or continuity
- Non-contact AC voltage detection
- Automatically turns on and off
- Visual (LED) and audible (buzzer) continuity indications
- Polarity indication
- Cat. III, 600V safety rating

MODEL ST-9902N

- Seven LEDs indicate AC or DC voltage levels

MODEL ST-9903N

- Easy-to-read 1999-count LCD indicates AC or DC voltage levels

Specifications:

MODEL ST-9902N

AC Voltage Range: 24, 120, 208, 240, 277, 480, 600V

DC Voltage Range: 6, 12, 24, 36, 48, 110, 220V

Continuity: 0 to 85k Ω

MODEL ST-9903N

AC/DC Voltage Range: 4 to 600V

Continuity: 0 to 10k Ω



Model	Description	Price
ST-9902N	Voltage/Continuity Tester	\$69.00
ST-9903N	Digital Voltage/Continuity Tester	\$119.00

DIGITAL MULTIMETER

Features:

- Non-contact voltage detector
- Auto-ranging multimeter
- Diode check and continuity test
- Built-in flashlight
- Auto power off
- Double molded housing and test leads
- EN61010-1 Cat. III, 1000V safety rating
- 0.2A/500V resettable fuse protection
- 2000-count LCD



Specifications:

AC/DC Current Range: 200mA

AC/DC Voltage Range: 600V

DC Voltage Range: 320mV to 600V

Resistance Range: 20M Ω

Model	Description	Price
ST-118	Voltage Detector/Multimeter	\$46.00

DIGITAL MULTIMETER

Features:

- Autoranging
- hFE and diode VF functions
- Continuity beeper
- Overload protection
- Automatic zero adjustment
- Automatic polarity indication
- Data hold
- Function annunciation on LCD display with bargraph
- Low battery indicator
- Supplied with battery



Specifications:

AC/DC Current Range: 25 μ A to 10A

AC Voltage Range: 3.5mV to 750V

DC Voltage Range: 320mV to 600V

Resistance Range: 32M Ω

Continuity Range: <20M Ω

Dimensions: 6.8 x 3.3 x 1.4"

Weight: 8.5 oz

Model	Description	Price
K5060	Digital Multimeter	\$180.00

ELECTRICAL TESTER

Features:

- 2000-count ammeter & 4000-count multi-meter
- Dual LCDs for simultaneous display of non-invasive AC current and any test lead function
- Measure AC current, AC/DC voltage, resistance, capacitance, frequency, diode test and duty cycle measurements
- 0.5% basic DCV accuracy
- 0.5" (13mm) open jaw for easy cable access in tight locations
- Audible continuity beeper
- Data Hold "freezes" data on display
- Relative feature for non-current functions
- Complete with 36" attached test leads and 2 "AA" batteries



Specifications:

Function	Range	Resolution	Accuracy
AC Current	200A	0.1A	±3%
DC Voltage	200mV, 600V	0.1mV	±0.5%
AC Voltage	4, 40, 400, 600V	1mV	±1.5%
Resistance	400Ω, 4, 40, 400kΩ, 4, 40MΩ	0.1Ω	±1.2%
Capacitance	4, 40, 400nF, 4, 40, 200μF	1pF	±3.5%
Frequency	9.999Hz-10MHz	0.001Hz	±0.8%
Duty Cycle	99.9%	0.1%	±1.2%

Dimensions: 10.5 x 2.75 x 1.25" / 267 x 70 x 32mm
 Weight: 0.94 lb / 426 g

Model	Description	Price
ST-2001	Voltage/Continuity Tester	\$95.00

ELECTRICAL TESTERS

T5 electrical testers let you check voltage continuity and current with one compact tool. With the **T5**, all you have to do is select volts, ohms, or current and the tester does the rest. Tough test leads stow neatly in the back of the tester, making it easy to tote the **T5** in your tool pouch. The optional **H5** holster keeps the test probes and leads ready to test, and lets you clip the **T5** onto your belt.

Features:

- Measures volts AC or volts DC with precise digital resolution
- Displays resistance to 1000Ω
- Continuity beeper
- OpenJaw™ current lets you check current up to 1000A without breaking the circuit
- Rugged enough to withstand a 10-foot (3m) drop
- Detachable Slim-Reach™ probe tips are customized for national electrical standards
- Test leads accept Fluke accessory test clips
- Available in 600V and 1000V models
- Can stay connected much longer than solenoid type testers
- Auto off mode to conserve battery life
- **T5-600** protected to CAT III - 600V
- **T5-1000** protected to CAT III - 1000V
- UL 3111 listed, CSA C22.2, VDE



Specifications:

Function	Range	Resol'n	Accuracy	Freq. Resp.
VAC (avg)	1000V	1V	±(1.5% +2)	45 to 440 Hz
VDC	1000V	1V	±(1% +1)	n/a
Resistance	1000Ω	1Ω	±(1% +2)	n/a
AAC (open jaw)	100.0A	0.1A	±(3% +3)	45 to 440 Hz

Continuity Beeper: On at <25Ω, off at >400Ω
 Volts Indicator: Guaranteed on by 30 VAC
 Power Supply: Two AA zinc chloride
 Battery Life: 200 hr. zinc chloride, 400 hr. alkaline
 Operating Temp.: -10 to 50°C
 Temp. Coefficient: 0.1 x (specified accuracy)/°C (<18°C or >28°C)
 Max. Operating Voltage: **T5-600:** 600V AC/DC overvoltage Category III
T5-1000: 1000V AC/DC overvoltage Category III between any terminal and earth ground
 Dimensions (H x W x L): 30.5 x 51 x 203 mm (1.2 x 2.0 x 8.0")
 Weight: 0.3kg (10 oz)

Model	Description	Price
T5-600	600V Voltage/Continuity/Current Tester	\$155.00
T5-1000	1000V Voltage/Continuity/Current Tester	\$170.00
H5	Custom Holster	\$26.00
AC285	Large Jaw Alligator Clips	\$21.00
AC220	Industrial Test Clips	\$37.00

DIGITAL MULTIMETERS



Features:

- True-RMS AC measurements for accurate readings
- 600V measurement range
- 10A continuous (**111 & 112**)
- Resistance and continuity
- Frequency and capacitance
- Min/Max to record signal fluctuations
- 6000-count digital display with 33-segment bargraph
- Backlight to work in dim areas (**112**)
- Simple rotary switch to set all functions
- Protective holster is removable
- IEC Cat III 600V safety rating
- 300 hours of continuous battery life
- Dimensions: 46 x 96 x 160mm (1.8 x 3.8 x 6.3")

Specifications:

Function	Range	Accuracy
VDC	6000mV, 6.000, 60.00, 600.0V	±0.7%
VAC	6000mV, 6.000, 60.00, 600.0V	±1.0%
ADC	6.000, 10.00A	±1.0%
AAC	10.00A	±1.5%
Resistance	600.0 Ω, 6.000, 60.00, 600.0kΩ, 6.000, 40.00MΩ	±1.5%
Capacitance	1000nF, 10.00, 100.0, 9999μF	±1.9%
Frequency	99.99, 999.9, 9.999Hz, 50.00kHz	±0.1%

Model	Description	Price
110/EFSP	Digital Multimeter	\$169.00
111/EFSP	Digital Multimeter w/ 10A	\$215.00
112/EFSP	Digital Multimeter w/ 10A & backlight	\$231.00

DIGITAL MULTIMETERS

Features:

MODEL	12-INTL	16
4000-count digital display	•	•
VCheck™	•	•
Min/Max Record w/elapsed time clock	•	•
Continuity capture	•	•
Continuity beeper	•	•
Capacitance	•	•
Diode test	•	•
Temperature		•
Microamps		•

Specifications:

FUNCTIONS	RANGE	ACCURACY
VDC	4000mV, 4.000, 40.00, 400.0, 600V	±(0.9% +1)
VAC	4000mV, 4.000, 40.00, 400.0, 600V	±(1.9% +1)
ADC	200.0μA	±(1.0% +2)
AAC	200.0μA	±(2.0% +3)
Resistance	400.0Ω, 4.000, 40.00, 400.0kΩ, 4.000, 40.00MΩ	±(0.9% +1)
Capacitance	1.00, 10.00, 100.0, 1000, 10,000μF	±(1.9% +2)



Model	Description	Price
12-INTL	Digital Multimeter	\$189.00
16	Digital Multimeter w/ Temperature	\$221.00

DIGITAL MULTIMETERS



The **175**, **177** and **179** are designed tough to withstand the harshest work environments and to be accurate enough to rival most bench meters.

Features:

- 6000-count display provides better resolution
- Wide 1000V measurement range
- 0.09% basic DC accuracy zeros in on tight readings (**177** & **179**)
- True RMS AC voltage and current measurement for accurate readings on all waveforms
- Capacitance, resistance, continuity and frequency
- Min/Max/Average records irregular activity
- Auto and manual hold
- Backlight for work in dim areas (**177** & **179**)
- **Model 179** measures temperature in °C and °F (thermocouple included)
- IEC 1010 Cat. IV 600V, Cat. III 1000V safety ratings
- Easy-access battery door to change the battery without breaking the calibration seal
- Overmolded case features integrates probe holders
- Compatible with ToolPak™ meter hanging kit

Specifications:

Function	Range	Accuracy
VDC	6000mV, 6.000, 60.00, 600.0, 1000V	±0.9% (177 & 179) ±0.15% (175)
VAC	6000mV, 6.000, 60.00, 600.0, 1000V	±1.0% rdg.
ADC	60.00, 400.0mA, 6.000, 10.00A	±1.0% rdg.
AAC	60.00, 400.0mA, 6.000, 10.00A	±1.5% rdg.
Resistance	600.0Ω, 6.000, 60.00, 600.0kΩ, 6.000, 50.00MΩ	±0.9% rdg.
Capacitance	1000nF, 10.00, 100.0, 9999μF	±1.2% rdg.
Frequency	99.99, 999.9, 9.999 Hz, 99.99kHz	±0.1% rdg.
Temperature	-40 to 400°C/-40 to 752°F	±1.0% rdg.

Model	175/EFSP	177/EFSP	179/EFSP
True RMS measurements	AC	AC	AC
Digital display w/ 4X/second update rate	6000-count	6000-count	6000-count
Analog bargraph w/ 40X/second update rate	33 segments	33 segments	33 segments
Display backlight		•	•
User-selectable auto or manual ranging	•	•	•
Display Hold	•	•	•
Max/Min/Average record mode w/ audible alarm	•	•	•
Temperature measurement (w/ thermocouple probe included)			•
Smoothing function filters rapid changes in input	•	•	•
Diode test & continuity beeper	•	•	•
Input Alert™	•	•	•
Signals poor lead connections	•	•	•
Signals dangerous voltages over 30V	•	•	•
Overmolded case	•	•	•
Easy access battery compartment	•	•	•
Selectable sleep mode	•	•	•
Price	\$293.00	\$324.00	\$339.00

DIGITAL MULTIMETERS

Features:

MODEL 87-5 FEATURES:

- Accurately measure true-rms AC voltage, current and frequency
- Accurate measurements on adjustable speed motor drives
- Built-in thermometer
- Every **83-5** & **87-5** comes with **TL75** test leads, **AC72** alligator clips, 9V battery (installed), removable holster, manual and operator's guide

MODEL 87-5E FEATURES:

- Industrial Electrician Combo Kit includes **87-5** multimeter plus: **TL222** 1.5m silicone test leads, **TP238** test probes, **AC220** retractable long-reach alligator clips, magnetic hanger, **80BK** temperature probe, and **C800** carrying case

MODEL 787 FEATURES:

- Cat. III 1000V safety-rated true-rms multimeter with mA source
- Simultaneous mA and % of scale readout on mA output
- 25% manual step plus Auto Step and Auto Ramp on mA output
- Includes **C81Y** protective holster with Flex-Stand, **TL75** test lead set with alligator clips, 9V battery (installed) and manual



Model	Description	Price
87-5/E-KIT	Industrial Electrician Combo Kit	\$618.00

Specifications:

Function	Range	83-5	87-5	787
VDC	4000mV, 4.000V, 40.00V, 400.0V, 1000V	±(0.1% + 1)	±(0.05% + 1)	±(0.1% + 1)
VAC	4000mV, 4.000V, 40.00V, 400.0V, 1000V	±(0.5% + 2)	±(0.7% + 2)	±(0.7% + 2)
ADC	400.0µA, 4.000mA, 40.00mA, 400.0mA, 4.000A, 10A*	±(0.4% + 2)	±(0.2% + 2)	±(0.2% + 2)**
AAC	400.0µA, 4.000mA, 40.00mA, 400.0mA, 4.000A, 10A*	±(1.2% + 2)	±(1.0% + 2)	±(1.0% + 2)*
Resistance	400Ω - 40.00MΩ	±(0.4% + 1)	±(0.2% + 1)	±(0.2% + 1)
Conductance	40.00ns	±(1.0% + 10)	±(1.0% + 10)	n/a
Capacitance	5nF - 5µF	±(1.0% + 3)	±(1.0% + 3)	n/a
Frequency	199.99Hz, 1.9999kHz, 19.999kHz, 199.99kHz	±(0.005% + 1)	±(0.005% + 1)	±(0.005% + 1)

* 10A continuous. 20A for up to 30 seconds and not specified. For **787**, 0.44A continuous, 1A for up to 30 seconds.

** 30.000mA full scale, 1µA resolution

Feature	83-5	87-5	787
True-rms AC measurement		•	•
Selectable motor drive filter		•	
Digital display/counts	4000	4-1/2 digit, 20,000 counts	4000; 30,000 for DC current
Analog bargraph	•	•	
Measures AC/DC voltage (up to 1000V)	•	•	•
Measures AC/DC current (up to 10A)	•	•	1µ to 1A*
Source, simulate, ramp & step current to 20mA	n/a	n/a	•
Auto and manual ranging	•	•	•
Resistance	•	•	•
Capacitance	•	•	n/a
Continuity & diode test	•	•	•
Frequency & duty cycle	•	•	Frequency only
MIN/MAX/AVG recording	•	•	•
Relative mode	•	•	•
Two-level display backlight	•	•	Single level
Cat. III 1000V rating	•	•	•
Thermometer w/ bead type thermocouple probe		•	
Price	\$510.00	\$541.00	\$922.00

* 10A continuous, 20A for up to 30 seconds. For **787**, 0.44A continuous, 1A for up to 30 seconds.

DIGITAL MULTIMETERS



FlukeView® Forms Software
Model FVF-SC2
Price: \$239.00



ToolPak™ meter strap & magnet hanging kit
Model TPAK
Price: \$40.00



Features:

- 0.025% basic DC accuracy
- 50,000-count resolution with instant readings for detailed analysis
- 100 kHz AC bandwidth for troubleshooting modern electronics
- Internal memory for up to 3 days of stand-alone logging of measurement changes and manually storing of up to 100 different measurements
- Min/Max to record and time stamp values in elapsed time
- Fast Min/Max captures peaks to 250µS
- Temperature readings in °C or °F using optional K-type thermocouple
- Enhanced ranges, such as DC voltage measurements down to 10µV, and capacitance to 50,000µF
- Multiple reading display with bargraph and two-level backlight
- All inputs are protected to IEC 1010-1 Cat. III 1000V rating and Cat. IV 600V rating
- Approved for UL3111, CSA C22.2 No. 1010 and TÜV to EN61010 listing

FLUKEVIEW® FORMS SOFTWARE

- Form generating software for PCs
- Places measured data from the **187** or **189** into professional looking documents that may be customized
- Allows meter and PC to communicate via infrared port
- **FVF-SC2** includes software, infrared adapter, cable and connector

OPTIONAL TOOLPAK ACCESSORY

- Allows your meter to hang from any metal object (with rare earth magnet) or secure around a pipe (with hook-and-loop straps) for hands-free operation

Model	187	189
Primary Display	50,000 count	50,000 count
Secondary Display	51-segment bargraph	51-segment bargraph
True-rms AC, AC + DC	•	•
100 kHz AC bandwidth	•	•
dBm, dBV	•	•
Duty Cycle/Pulse Width	•	•
Battery and Fuse Access	•	•
Two Level Backlight	•	•
250µS Fast MIN/MAX	•	•
MIN/MAX/AVG Time-stamped	•	•
Stand-alone Logging		•
DC VOLTAGE		
Measuring Range	50.000 mV - 1000.0 V	50.000 mV - 1000.0 V
Maximum Resolution	0.001 mV	0.001 mV
Accuracy	±(0.025% + 5)	±(0.025% + 5)
AC VOLTAGE		
Measuring Range	50.000 mV - 1000.0 V	50.000 mV - 1000.0 V
Maximum Resolution	0.001 mV	0.001 mV
Accuracy	±(0.4% + 40)	±(0.4% + 40)
DC CURRENT		
Measuring Range	500.00 µA - 10.000 A	500.00 µA - 10.000 A
Maximum Resolution	0.01µA	0.01µA
Accuracy	±(0.15% + 2)	±(0.15% + 2)
AC CURRENT		
Measuring Range	500.00 µA - 10.000 A	500.00 µA - 10.000 A
Maximum Resolution	0.01 µA	0.01 µA
Accuracy	±(0.75% + 5)	±(0.75% + 5)
RESISTANCE		
Measuring Range	500.00 Ω - 500.00 MΩ	500.00 Ω - 500.00 MΩ
Maximum Resolution	0.1 Ω	0.01 Ω
Accuracy	±(0.05% + 2)	±(0.05% + 2)
Capacitance	1.100 nF - 50.00 mF	1.100 nF - 50.00 mF
Frequency	500.00 Hz - 999.99 kHz	500.00 Hz - 999.99 kHz
Temperature	-200/1350°C (-328/2462°F)	-200/1350°C (-328/2462°F)
Price	\$599.00	\$618.00

ANALOG/DIGITAL MULTIMETER



Features:

- 3200-count digital display and 31-segment analog bargraph
- Fast auto and manual ranging
- Touch Hold
- Min/max relative mode
- Audible continuity/diode test
- Rugged, O-ring sealed case and sealed battery/fuse door
- Operates from -15 to 55°C and 95% relative humidity
- Meets military shock, vibration and water resistance requirements
- More than 1000 hours of continuous use on alkaline batteries
- Dimensions: 203 x 95 x 56 mm (8 x 3.75 x 2.2")
- Weight: 0.75 kg (1.6 lb)

Specifications:

Function	Range	Accuracy
VDC	320.0mV, 3.200, 32.00, 320.0, 1000V	±(0.1% +1)
VAC	320.0mV, 3.200, 32.00, 320.0, 1000V	±(0.5% +3)
ADC	320.0µA, 3.200, 32.00, 320.0 mA, 10A	±(0.75% +2)
AAC	320.0µA, 3.200, 32.00, 320.0 mA, 10A	±(1.5% +2)
Resistance	320Ω, 3.200, 32.00, 320.0kΩ, 3.200, 32.00 MΩ	±(0.25% +1)

Model	Description	Price
27-YEL	Analog/Digital Multimeter	\$572.00

GRAPHICAL MULTIMETER



Features:

- Graphical 32,000 count multi-measurement display
- Simultaneous waveform display (DC to 1 MHz bandwidth)
- True-rms measurements
- Capacitance, conductance, frequency, duty-cycle, pulse-width, period and dB measurements
- 0.025% DC accuracy
- High impedance input
- Min/Max/Avg w/ time stamp
- Relative Mode
- Component test
- TrendGraph™
- Logic activity
- RS-232 interface
- Bright backlight
- Rechargeable batteries/line adapter

Specifications:

Function	Range	Accuracy
VDC	300.00mV - 1000.0V	±(0.025% + 2)
VAC	300.00mV - 1000.0V	±(0.5% + 4)
ADC	300.00µA - 10.000A	±(0.05% + 15)
AAC	300.00µA - 10.000A	±(0.75% + 10)
Frequency	1000.00Hz - 10.0000MHz	±(0.05% + 1)
Resistance	300.00Ω - 30.000MΩ	±(0.07% + 2)
Capacitance	10000pF - 1000µF	±(1.9% + 2)
dB/dBm	2 to 1200 Ω References	±0.5 dB

Model	Description	Price
867BE	Discontinued no direct repl, suggest 124/003	
SC860	FlukeView™ Software & RS-232 Cable	\$390.00

DIGITAL MULTIMETERS

Features Model 5XP:

- Manual ranging meter for residential and commercial electrical use, as well as general purpose troubleshooting
- 27 ranges/10 functions
- VolTect™ Non-contact Voltage Detector lets you instantly identify dangerous AC voltage
- Magne-Grip™ holster with magnetic hanging strap frees both hands for work
- 2000-count, 3-1/2 digit display
- Resistance and continuity for troubleshooting bad connections
- Battery load test with 1.5V and 9V capabilities
- Min/Max records minimum and maximum values
- Data Hold freezes display to "hold" reading
- Triple safety rating: Cat. I 1000V, Cat. II 600V, Cat. III 300V



Model 5XP

Model 15XP



Model 35XP

Features Model 15XP:

- For electronic and field service applications
- Autoranging display for faster measurements
- 2000-count, 3-1/2 digit display
- 0.1 mV voltage and 0.1 mA current resolution provides more precise measurements
- VolTect™ Non-contact Voltage Detector lets you instantly identify dangerous AC voltage
- Magne-Grip™ holster with magnetic hanging strap frees both hands for work
- TTL logic test to 20 MHz for digital circuits
- Resistance and continuity for troubleshooting bad connections
- Diode test for component level troubleshooting
- Data Hold freezes display to "hold" reading
- Integrated tilt stand for easy bench use
- Triple safety rating: Cat. I 1000V, Cat. II 600V, Cat. III 300V

Features Model 35XP:

- For plant maintenance, HVAC, electrical and electronics applications
- VolTect™ Non-contact Voltage Detector lets you instantly identify dangerous AC voltage
- Magne-Grip™ holster with magnetic hanging strap frees both hands for work
- 4000-count display resolution
- 0.1µA resolution for flame sensor testing
- Capacitance for motor run/start test
- Resistance to 20 MΩ
- Frequency to 20 MHz
- Continuity beeper
- Temperature measurement capability to 1000°C/1832°F with type K thermocouple included
- Data Hold freezes display to "hold" reading
- Triple safety rating: Cat. I 1000V, Cat. II 600V, Cat. III 300V

Specifications:

Model	5XP	15XP	35XP
Display Resolution	2,000 counts	2,000 counts	4,000 counts
Ranging	Manual	Auto	Auto
Basic Accuracy	±1.0%	±0.5%	±0.5%
AC/DC Voltage	750V/1000V	750V/1000V	750V/1000V
AC/DC Current	200mA	2A	2A
Resistance	20 MΩ	20 MΩ	40 MΩ
Capacitance	-	-	4000 µF
Frequency	-	-	40 MHz
Continuity Check	•	•	•
Diode Test	-	•	•
Data Hold	•	•	•
Min/Max	•	-	-
TTL Logic Test	-	•	-
Temperature	-	-	•
Auto Power Off	-	-	•
VolTect	•	•	•
Magne-Grip Holster	•	•	•
Price	\$63.00	\$95.00	\$127.00

DIGITAL MULTIMETERS

Features Model 30XR:

- Manual ranging meter with non-contact voltage detector that safely indicates the presence of live circuits
- Voltage Range: 70 to 600 VAC
- 9 ranges, 30 functions
- Cat. II 600V, Cat. III 300V safety ratings
- Includes Magne-Grip™ holster with magnetic hanging strap, test leads, manual, spare fuse and 9V battery

Features Model 33XR:

- Manual ranging meter
- Temperature, frequency and capacitance functions
- Extended 4000µF capacitance range
- Data Hold, Peak Hold, Min/Max and REL
- Cat. III 600V, Cat. II 1000V rating
- Includes Magna-Grip holster with magnetic hanging strap, test leads with threaded alligator clips, temperature adapter, Type K thermocouple, manual, spare fuse and 9V battery

Features Model 34XR:

Includes these added features:

- Autoranging for ease of use
- True RMS for the most accurate voltage measurements
- Temperature to 1832°F/1000°C
- Duty cycle
- Analog bargraph display
- Bright blue backlight for dim work areas



Model 37XR

Features Model 37XR:

- Autoranging
- True RMS for the most accurate voltage measurements
- Min/Max, Average, Relative, Data Hold
- 41-segment analog bargraph for measurement analysis
- 10,000 count display with 0.1% accuracy
- LCR component test functions - inductance, capacitance, resistance
- Frequency, logic test, dBm for easy circuit board troubleshooting
- Bright blue backlight
- Cat. III 600V, Cat. II 1000V
- Includes Magna-Grip holster with magnetic hanging strap, test leads with threaded alligator clips, manual, spare fuse and 9V battery

Features Model 38XR:

- True RMS, AC + Dc coupled for accurate ripple measurements
- 10,000 count with 0.25% accuracy
- Temperature to 1300°C/2372°F with type K thermocouple included
- 4-20mA current loop with % readout
- Duty cycle, capacitance and frequency
- Optically isolated RS232 interface for real time recording
- Bright blue backlight
- Cat. III 1000V, Cat. IV 600V rating
- Includes Magna-Grip holster with magnetic hanging strap, test leads with threaded alligator clips, Type K thermocouple probe, manual, spare fuse and 9V battery

Specifications:

Model	30XR	33XR	34XR	37XR	38XR
Display Resolution	2,000 counts	4,000 counts	4,000 counts	10,000 counts	10,200 counts
Analog Bargraph		•	•	•	•
Auto or Manual Ranging	Manual	Manual	Auto	Auto	Auto
DC Voltage	6000V	1000V	1000V	1000V	1000V
AC Voltage	600V Avg.	750V Avg.	750V Trms AC	750V Trms AC	750V Trms AC+DC
Basic DC Accuracy	±1.0%	±0.7%	±0.5%	±0.1%	±0.25%
DC Current	10A	10A	10A	10A	10A
AC Current	10A	10A	10A Trms	10A Trms	10A Trms
Resistance	20 MΩ	4 MΩ	40 MΩ	40 MΩ	40 MΩ
Capacitance	-	4000 µF	4000 µF	400 µF	400 µF
Frequency	-	40 MHz	40 MHz	10 MHz	10 MHz
Temperature	-	1832°F/1000°C	1832°F/1000°C		2372°F/1300°C
Diode Test	•	•	•	•	•
Continuity Check	•	•	•	•	•
Display Backlight			•	•	•
Min/Max	•	•	•	•	•
Relative		•		•	•
Data Hold	•	•	•	•	•
Peak Hold		•		•	•
Price	\$95.00	\$142.00	\$174.00	\$206.00	\$238.00

DIGITAL MULTIMETER

Features:

- Measure AC and DC voltages, AC and DC current, resistance, diode, and to perform audible continuity checks with accuracy and ease.
- Small and lightweight, with a carrying case and test leads wound on its body
- Auto power-off function extends the battery life. If no key inputs happen within a 30-minute period, the meter will shut-off automatically.
- Accuracy is guaranteed for 1 year, 23°C ±5°C, less than 75% RH



Specifications:

AC/DC VOLTAGE

Range: 4V, 40V, 400V, 600V
 Resolution: 1mV, 10mV, 100mV, 1V
 Accuracy: AC: ±0.8% rdg. ±0.5% f.s. ± 3 dgt.
 DC: ±0.8% rdg. ± 2 dgt.

O/L Protection: 600V dc or rms for all ranges
 Input impedance: 10MΩ
 AC Conversion: Average responding, calibrated in rms of a sine wave
 Frequency: 50-400Hz, 50-60Hz for 400V & 600V ranges

AC/DC CURRENT

Range: 40mA, 400mA
 Resolution: 0.01mA, 0.1mA
 Accuracy: AC: ±3.0% rdg. ±0.5% f.s. ± 3 dgt.
 DC: ±2.0% rdg. ± 2 dgt.

O/L Protection: 500mA/250V fuse

RESISTANCE

Range: 400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ
 Resolution: 0.1Ω, 1Ω, 10Ω, 0.1kΩ, 1kΩ, 10kΩ
 Accuracy: ±1.5% rdg. ± 2 dgt.

O/L Protection: 250V rms AC for all ranges
 Open Circuit Volt.: 0.65V

Model	Description	Price
M320	Digital Multimeter	\$40.00

DIGITAL MULTIMETERS

Features:

- True rms AC measurements (**AM-105 & AM-110**)
- Auto and manual ranging
- Relative zero mode
- Diode test
- Audible continuity
- Peak hold (30ms response time)
- Data hold
- Large, easy-to-read LCD
- Display backlight (**AM-110** only)
- Audible warning against improper connection
- Auto power off
- Cat. III 600V, Cat. II 1000V safety ratings



Specifications:

AC VOLTAGE

Range: 400.0mV, 4.000, 40.00, 400.0, 1000V
 Accuracy: ±1.5% rdg. ± 5 LSD (4V to 400V ranges)

DC VOLTAGE

Range: 400.0mV, 4.000, 40.00, 400.0, 1000V
 Accuracy: ±0.5% rdg. ± 3 LSD (4V to 400V ranges)

AC/DC CURRENT

Range: 400.0, 4000μA, 40.00, 400.0mA, 4.000, 10.00A
 Accuracy: ±2.0% rdg. ± 6 LSD

RESISTANCE

Range: 4400.0Ω, 4.000, 40.00, 400.0kΩ, 4.000, 40.00MΩ
 Accuracy: ±2% rdg. ± 2 LSD (0.01 to 99.9MΩ)

FREQUENCY

Range: 5.000, 50.00, 500.0Hz, 5.000, 50.00kHz, 5.000, 1.000MHz
 Accuracy: ±0.5% rdg. ± 4 LSD

CAPACITANCE

Range: 500.0nF, 5.000, 50.00, 500.0, 3000μF
 Accuracy: ±3.5% rdg. ± 6 LSD

Model	Description	Price
AM-100	Digital Multimeter	\$134.00
AM-105	Digital Multimeter, TRMS	\$203.00
AM-110	Digital Multimeter, TRMS & Backlight	\$223.00

DIGITAL MULTIMETERS

Features Model DM78A:

- The resolution and measuring functions of larger, more expensive meters in a credit card-sized DMM
- Voltage, continuity, diode and resistance measurements
- 5 functions, 16 ranges
- 3200-count display with analog bargraph
- Data hold
- Auto-off saves batteries
- Shipped with test leads and probes attached, protective case, batteries and manual

Features Model DM73B:

- Meter with built-in test probe for one-hand operation
- Unique pen shape auto-ranging meter
- Small and lightweight, goes anywhere
- 3400-count display with analog bargraph
- Superior 0.5% accuracy
- Continuity beeper and diode test
- Data hold
- Auto off
- Shipped with replacement probe tip, alligator clip for ground test lead, batteries and manual

Specifications:

Model	DM78A	DM73B
Voltage:	450V AC/DC	600V AC/DC
Current:	n.a.	n.a.
Resistance:	32M Ω	34M Ω
Safety Ratings:	Cat. II 300V	Cat. III 300V, Cat. II 600V



Model	Description	Price
DM78A	Credit Card Style Digital Multimeter	\$55.00
DM73B	Pen Style Digital Multimeter	\$55.00

DIGITAL MULTIMETERS

Features Model DM7:

- Compact digital multimeter with attached test leads
- Ideal for the home, school or workshop
- 6 functions, 14 ranges
- Special ranges to test household batteries
- 2000-count display
- Diode test
- Holster included

Features Model AM8:

- Compact analog multimeter
- Ideal for the home, car or workshop
- 5 functions, 15 ranges
- Special ranges to test household batteries
- High sensitivity taut band movement
- Ohms zero adjust
- Holster included

Specifications:

Model	DM7	AM8
Voltage:	600V AC/DC	500V AC/DC
Current:	200mA DC	250mA DC
Resistance:	2M Ω	2M Ω
Battery Test:	1.5V, 9V	1.5V, 9V
Safety Ratings:	Cat. II 300V	Cat. II 600V



Model	Description	Price
DM7	Digital Multimeter	\$44.00
AM8	Analog Multimeter	\$30.00

DIGITAL MULTIMETERS

Features:

MODEL HD110:

- 0.1% VDC accuracy
- 1500-hour battery life
- Completely sealed and environment proof

MODEL HD110T:

- All the features of the **HD110** plus temperature measurement to 2000°F/ 1093°C
- Type K thermocouple probe included

MODEL HD110B:

- IP67 water proofing for harsh environments
- Drop-proof housing and PCB mounting
- Oversized, shock mounted LCD display
- Data hold
- Live voltage safety tester
- Holster included

MODEL HD115B:

- Includes all of the features of **HD110B**, plus
- Exclusive, "Digi-Glo" backlight
- Min/max and peak hold
- Capacitance to 20mF



MODEL HD160B:

- Autoranging meter with true rms AC measurements
- Menu selectable auto max, min, rel and probe hold modes
- 10,000-count display with analog bargraph
- Exclusive "Digi-Glo" backlight
- Live voltage Safety Tester
- Extra fusing and protection from accidental overloads
- Drop-proof special housing and PCB mounting
- Special sealing for environment and water proofing
- Holster included

Specifications:

MODEL	HD110/HD110T	HD110B/HD115B	HD160B
Voltage:	1000 VDC, 1500 VAC	1000 VDC, 1500 VAC	1000 VDC, 1500 VAC
Ranging:	Manual	Manual	Auto
Accuracy:	0.1%	0.1%	0.1%
AC Conversion:	Average	Average	True rms
AC/DC Current:	10A, fused	10A, fused	10A, fused
Resistance:	20MΩ	20MΩ	40MΩ
Diode/Continuity	Yes	Yes	Yes
Display Counts:	2000	2000	10,000
Safety Rating:	-	Cat III 1000V	Cat III 1000V

Model	Description	Price
HD110	Heavy Duty Digital Multimeter	\$412.00
HD110T	Heavy Duty DMM w/ Temperature	\$443.00
HD110B	Heavy Duty Digital Multimeter	\$269.00
HD115B	Heavy Duty DMM w/ Capacitance	\$317.00
HD160B	Heavy Duty DMM, True RMS	\$364.00

DIGITAL MULTIMETER

Features:

- Meets EEx ib group I and IIc and temperature class T assigned specifications
- Measures ACV, DCV, AAC and ADC, resistance and continuity
- Logic signal input and ADP input
- Min/Max/Avg functions
- 50-segment bargraph with zoom and center zero
- Current range protected by 500mA intrinsically safe fuse
- IP67 waterproof housing



Specifications:

AC VOLTAGE

Range: 500mV, 5V, 50V, 500V, 750V
 Resolution: 10μV, 100μV, 1mV, 10mV, 100mV
 Accuracy: ±1.7% rdg. + 3 cts.

DC VOLTAGE

Range: 500mV, 5V, 50V, 500V, 1000V
 Resolution: 10μV, 100μV, 1mV, 10mV, 100mV
 Accuracy: ±0.25% rdg. + 2 cts.

AC/DC CURRENT

Range: 500μA, 5mA, 50mA, 500mA
 Resolution: 10nA, 100nA, 1μA, 10μA
 Accuracy: AC: ±0.75% rdg. + 30 cts.
 DC: ±0.2% rdg. + 2 cts.

RESISTANCE

Range: 500Ω, 5kΩ, 50kΩ, 500kΩ, 5MΩ, 50MΩ
 Resolution: 10mΩ, 100mΩ, 1Ω, 10Ω, 100Ω, 1kΩ
 Accuracy: ±1.0% rdg. + 2 cts.

CONTINUITY

Detection Threshold: 10Ω to 20Ω
 Response Time: 1ms

DIODE TEST

Voltage Range: 0 to 2V
 Current: 1mA ±20%

Model	Description	Price
MX57E/2130.65	Intrinsically Safe Digital Multimeter	\$1178.00

DIGITAL MULTIMETERS

Features Model DM-800:

- Autoranging, 3-5/6-digit, 5000-count display for greater accuracy
- Frequency and capacitance measurements plus diode and continuity tests standard
- RS 232 capable, may be connected to a PC for extended measurement capability with optional optically-isolated interface

DMSC-8L

- Low ohm range calibration, subtracts test lead resistance

Features DM-810:

- All the features of the **DM-800**, plus
- True RMS accuracy

Features DM-820:

- All the features of the **DM-810**, plus
- Record max, min, max-min, and average readings and data hold
- Crest capture (5ms peak hold) max, min, and max-min readings
- Relative offset display mode to see relative changes in measurements
- Temperature measurement standard
- Backlit display for easy viewing

Specifications:

AC/DC voltage

Ranges: 50.00, 500.0mV; 5.000, 50.00, 500.0, 1000V

AC/DC Amperage

Ranges: 500.0, 5000µA; 50.00, 500.0mA; 5.000, 10.00A

Resistance:

50.00, 500.0Ω; 5.000, 50.00, 500.0kΩ; 5.000, 50.00MΩ

Capacitance:

50.00, 500.0nF; 5.000, 50.00, 500.0, 9999µF

Frequency:

10Hz-125kHz

Temperature:

K type, -58° F to 1832° F (-50° C to 1000° C)

Overvoltage

IEC 61010-1 Ed 2 draft (1999) Category IV, 600V; Category III, 1000V

Protection:

600V; Category III, 1000V



Features Model DM-200:

- Autoranging for convenient operation - and to save you time
- Data hold to capture measurements
- Auto power off and low battery indicator
- RS 232 capable, may be connected to a PC for extended measurement capability with optional optically isolated interface **DMSC-2**

Features Model DM-210:

- All the features of the **DM-200**, plus
- Relative offset display mode to see relative changes in measurements
 - Frequency, temperature, and capacitance measurements

Specifications:

Voltage Ranges:

ACV 250.0mV; 2.500, 25.00, 250.0, 750V
DCV 250.0mV; 2.500, 25.00, 250.0, 1000V

AC/DC Amperage

Ranges: 250.0, 2500µA; 25.00, 250.0mA; 2.500, 10A

Resistance:

250.0.; 2.500, 25.00, 250.0k.; 2.500, 25.00M.

Voltage Detection

Range: 30V-500V

Capacitance:

2.500, 25.00, 250.0nF; 2.500, 25.00µF

Frequency:

30Hz-200kHz

Temperature:

K type, -4° F to 572° F

Overvoltage

IEC 61010-1 Category III, 600V;

Protection:

Category II, 750VAC/1000VDC

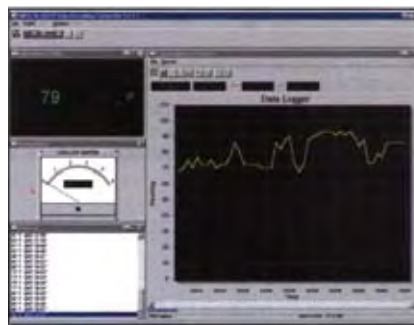


Model	Description	Price
DM-200	Digital Multimeter	\$102.00
DM-210	Digital Multimeter	\$152.00
DM-800	Digital Multimeter	\$212.00
DM-810	Digital Multimeter	\$241.00
DM-820	Digital Multimeter	\$271.00

RS-232 INTERFACE KITS

Features:

- Connects to a PC serial port for data storage and retrieval from Greenlee digital multimeters
- Allows retrieval of stored data and real-time data logging and graphing
- Retrieve stored data log from DML-series
- Export data to disk for analysis with any spreadsheet
- Hardware requirements: 486/66 personal computer 16MB of memory (RAM) Windows 95/98® serial COM port
- See both digital and analog meter readouts on-screen, plus a large, easy-to-read graph of logged values



Accessories included:

- Optical RS 232 cable, 9-pin serial male connector, and software for PC connection

Model	Description	Price
DMSC-2	RS-232 Interface Kit (for 200 Series DMM's)	\$102.00
DMSC-8L	RS-232 Interface Kit (for 800 Series DMM's)	\$117.00

DIGITAL MULTIMETERS

Features:

- Simultaneously view AC volts and frequency, AC amps and frequency, conductance and resistance, or value events on dual displays
- Using three different "relative" measurement modes, you can enter a reference value, then make measurements in comparison to it
- 4,000 and 40,000 count capability
- Analog bargraph
- Basic accuracy as high as 0.08%
- Auto or manual ranging
- Crest/peak functions
- Sort stored records



Specifications:

Model	M8035	M8037
AC Conversion	Average	True rms
Duty Cycle	-	•
dBm	-	•
Display Backlight	-	•
DC Voltage	40mV to 1000V	40mV to 1000V
Basic Accuracy	±0.08% + 1 dgt.	±0.08% + 1 dgt.
AC Voltage	400mV to 750V	400mV to 750V
Basic Accuracy	±0.5% + 3 dgts.	±0.5% + 3 dgts.
AC/DC Current	40mA to 10A	40mA to 10A
Basic Accuracy	±0.2% + 2 dgts.	±0.2% + 2 dgts.
Resistance	40Ω to 40MΩ	40Ω to 40MΩ
Basic Accuracy	±0.1% + 2 dgts.	±0.1% + 2 dgts.
Frequency	100Hz to 4MHz	100Hz to 4MHz
Capacitance	4nF to 40mF	4nF to 40mF
Conductance	400nS	400nS
Dimensions (HWD)	7.8 x 3.8 x 2.2"	7.8 x 3.8 x 2.2"
Weight	1.1 lb.	1.1 lb.
Price	\$396.00	\$479.00

BENCH MULTIMETER



For the price of a 5-1/2 digit digital multimeter, now you can get the top-quality 6-1/2 digit **34401A**. And you can rest easy knowing that the last measurement of the day will be as accurate as the first: 24-hour accuracy is 0.0015% for DC volts and 0.06% for AC.

One or two button pushes give you a wide array of functions from DC volts to frequency to dB and dBm. Advanced tests that can drive a TTL output, min/max/avg readouts and DC voltage ratios. Standard Commands for Programmable Instruments (SCPI) as well as **HP 3478A** and **Fluke 8840/8842A** command languages are built-in, so you won't have to rewrite existing test software. Both HP-IB and RS-232 interfaces are standard, for simple connectivity.

Specifications:

RANGES

DC Voltage:	100mV to 1000V
AC Voltage:	100mV to 750V
DC Current:	10mA to 3A
AC Current:	1A to 3A
Resistance:	100Ω to 100MΩ
Frequency/Period:	3Hz/0.333s to 300kHz/3.33μs
Continuity:	1000Ω, variable threshold from 1Ω to 1kΩ
Diode Test:	1V; test current: 1mA
Power Supply:	100/120/220/240V, 45-65Hz, 360-440Hz

Model	Description	Price
34401A	Digital Multimeter	\$1581.00

BENCH MULTIMETER



The **Fluke 45** is a feature-rich 5-digit, 100,000 count meter that truly fits all applications and virtually any measurement need - on the workbench, or in the field. Two multifunction displays and 16 different measurement capabilities allow wide ranging versatility at an affordable price.

The **Fluke 45** delivers high performance and flexibility for manufacturing test, depot and field service, as well as R & D applications

Features:

- Multifunction vacuum fluorescent dual display allowing the user to measure two different parameters of the same signal from one test connection, and view both measurements at the same time
- True RMS voltage and current, including AC + DC
- RS-232 interface standard, IEEE-488.2 option
- Frequency measurement to 1 MHz
- dB measurements: 21 selectable reference impedances. From 2Ω to 8000Ω, and audio power from 2Ω to 16Ω
- MIN/MAX and RELATIVE modes
- Compare (Hi/Lo/Pass) function for quick intolerance tests
- 0.05% DC current accuracy for 4-20 mA current loop service
- Diode test/continuity
- Closed-case calibration: calibration can be performed via the RS-232 interface or manually from the front panel. No internal adjustments are required.
- Quickstart™ accessory software package; allows quick set-up and effortless communication between the **45** and an IBM PC or compatible. Custom test procedures are easily created, saved, and recalled.
- Optional rack-mount kit

Specifications:

Function	Range	Accuracy	Resolution
VDC (True RMS, AC coupled) Freq. 20Hz - 100kHz	0 - 1000V	±0.025% + 2	1μV - 0.01V
VAC (True RMS, AC coupled) Freq. 20Hz - 100kHz	0 - 750V	±0.2% + 10	1μV - 0.01V
dB Readout (600W Ref.) (Ref. Z 2 - 8000W)	-34 - +60	±0.08dBm	0.01 - 0.1dB
ADC	0mA - 10A	±0.05% + 2	0.1μA - 10mA
AAC (True RMS, AC coupled) Freq. 20Hz - 100kHz	15μA - 10A	±0.5% + 10	0.1μA - 10mA
Resistance	0W - 100MW	±0.05% + 2	0.001W - 1MW
Frequency	5Hz - 1MHz	±0.05% + 1	.01Hz - 1kHz

Display: 3000 counts, 100,000 counts
 Reading Rates: Fast: 20X/sec.; Medium: 5X/sec.;
 Slow: 2.5X/sec.
 Dimensions: 216 x 93 x 286 mm (8.5" x 3.67" x 11.27")
 Weight: 3.2 kg (7 lb.) w/ battery

Model	Description	Price
45-INTL	Dual Display Bench Multimeter	\$1316.00
45-01K	Rechargeable Lead Acid Battery Kit	\$308.00
45-05K	IEEE-488.2 Interface Kit	\$325.00
M00-200-634	Rack Mount Kit	\$194.00
VVF-SC3	Software	\$239.00

MULTIMETER COMBO KITS

Electrician's Multimeter and Voltage Tester Combo Kit

- 179 true-rms digital multimeter
- 1AC non-contact voltage tester
- TL224 SureGrip™ silicone test leads
- TP220 SureGrip™ silicone test probes
- AC220 SureGrip™ heavy duty alligator clips
- 80BK integrated temperature probe
- C800 hard carrying case



Model	Description	Price
179/1AC-KIT	Multimeter & Voltage Tester Combo Kit	\$401.00

Electronics Multimeter and Deluxe Accessory Kit

- 179 true-rms digital multimeter
- TL224 SureGrip™ silicone test leads
- TP910 electronic test probes
- AC280 SureGrip™ heavy duty hook clips
- 80BK integrated temperature probe
- C800 hard carrying case



Model	Description	Price
179/EDA-KIT	Multimeter & Accessory Combo Kit	\$401.00

Electrician's Multimeter and Clamp Meter Combo Kit

- 112 true-rms digital multimeter
- 322 clamp meter
- TL75 hard point test lead set
- C800 hard carrying case



Model	Description	Price
112/322-KIT	Multimeter & Clamp Meter Combo Kit	\$339.00

HVAC Multi-meter and Clamp Meter Combo Kit

- 16 digital multimeter with temperature
- 322 clamp meter
- TL75 hard point test lead set
- 80BK integrated temperature probe
- C800 hard carrying case



Model	Description	Price
16/322-KIT	Multimeter & Clamp Meter Combo Kit	\$332.00

Logging Multimeter and FlukeView® Forms Combo Kit

- 189 logging digital multimeter
- FVF-SC2 FlukeView® forms documentation & analysis software
- Includes software, infrared adapter, cable & connector



Model	Description	Price
189/FVF	Multimeter & Software Combo Kit	\$758.00

Logging Multimeter and ToolPak Meter Hanging Strap Combo Kit

- 179 true-rms digital multimeter
- TPAK ToolPak magnetic meter hanging strap
- Includes universal hanger, magnet & 17-inch (23 cm) "hook-and-loop" strap



Model	Description	Price
179/TPAK	Multimeter & Hanging Strap Combo Kit	\$355.00

VOLTAGE TESTERS



Model 1LAC-A



Model 1AC-A1

VoltAlert™ ac voltage testers from Fluke are easy to use - just touch the tip to a terminal strip, outlet, or cord. When it glows red, you know there's voltage in the line.

Electrician's, maintenance, service, safety personnel, and homeowners can quickly test for energized circuits and defective grounds on the factory floor, in the shop, or at home. Now available in two voltage ranges

The new **VoltAlert 1LAC** is for detecting control voltage from 24V AC to 90V AC. The **VoltAlert 1AC** is for detecting line voltage from 90V AC to 600V AC.

Features:

- Fits in a shirt pocket for convenience
- All outer surfaces are non-conductive for safety
- Detects voltage without metallic contact

Specifications:

Operating Range: **1AC:** 90V to 600V AC
1LAC: 24V to 90V AC
 Operating Temperature: -10 to 50°C (14 to 122°F)
 Operating Humidity: 0 to 30°C, 95% (32 to 86°F)
 30 to 40°C, 75% (86 to 104°F)
 40 to 50°C, 45% (104 to 122°F)
 Operating Altitude: 3000 m (10,000 ft.)
 Enclosure: IEC 529, IP54

Model	Description	Price
1LAC-A	VoltAlert™ 24V AC to 90V AC	\$35.00
1AC-A1	VoltAlert™ 90V AC to 600V AC	\$35.00

ELECTRICAL TESTER



The **T3** is a voltage and continuity tester that's designed to work long and hard. There are no settings - just probe the circuit and the **T3** will show you whether you're looking at AC volts, DC volts, or an open circuit. You don't even have to turn it on or off! With seven different voltage indicators, it can clearly differentiate between key voltage levels.

Features:

- LEDs clearly indicate 7 AC and 7 DC nominal voltage levels
- Indicates DC voltages as low as 6 volts
- DC polarity indicator
- Automatically selects continuity beeper or voltage measurement
- Rugged enough to withstand a 10-foot (3m) drop
- Protected to 1000V for use in CAT iii environments
- Can stay connected much longer than solenoid type testers
- Automatically activates and shuts down to conserve battery power
- Heavy-duty test leads for long life
- UL 3111 listed, CSA C22.2, VDE

Model	Description	Price
T3CAN	Electrical Tester	\$93.00

VOLTAGE DETECTORS

Model AC-9 Non-contact Voltage Detector

Features:

- Detects voltage without contact
- Built-in bright flashlight with on/off button
- Flashing red LED indicator
- For use on 50/60 Hz circuits
- Double molded plastic housing
- All outer surfaces are non-conductive for safety
- Convenient size with pocket clip
- complete with 2 "AAA" batteries

Specifications:

- Voltage Detection: 100 to 600VAC
- Cat. IV 600V safety rating
- Dimensions: 6.25 x 1" (159 x 25mm)
- Weight: 1.5oz (42g)



Model	Description	Price
AC-9	Non-contact Voltage Detector	\$20.00

Model 2121.01 Voltage Tester

Specifications:

- AC Voltage Range: Contact Method: 70 to 250 VAC;
Non-contact Method: 70 to 600 VAC
- Frequency Range: 50 to 500 Hz
- DC Voltage Range: Up to 250 VDC
- Polarity Check: 1.5 to 36 VDC
- Continuity Check: 0 to 5 MΩ
- Microwave Leakage Detection: 5 mW/cm²
- Temperature Range: 14 to 122°F (-10 to 50°C)
- Power Supply: 2 x 1.5V alkaline or silver type; 392, AG3 LR41, 192, V3GA



Model	Description	Price
2121.01	Voltage Tester	\$14.00

Model GT-11 Non-contact Voltage Detector

Features:

- Use to detect voltage in outlets, lighting fixtures, circuit breakers, wires, and cables or find a break in a wire
- Non-contact voltage detection
- Visual and audible alarms
- On/Off switch for longer battery life
- Pen-size meter easily fits into pockets or tool pouches
- Includes (2) 1.5V AAA batteries

Specifications:

- Voltage Detection: 50 to 1000 VAC
- Frequency Range: 50 to 500 Hz
- Overvoltage Protection: Cat. IV, 600V; Cat. III, 1000V



Model	Description	Price
GT-11	Non-contact Voltage Detector	\$19.00

Model VT201 Non-contact Voltage Detector

Features:

- Quickly check for the presence of AC voltages, without direct electrical contact
- Safe non-contact detection of voltages from 70 to 440 VAC
- Both audible and visible indicators
- Beeper increases in frequency as proximity to voltage increases
- Bright red flashing LED
- Push-button actuator
- Batteries included

Specifications:

- Voltage: 70 to 440 VAC
- Frequency: 50/60 Hz
- Operating Distance: Approx. 2 (5cm)



Model	Description	Price
VT201	Non-contact Voltage Detector	\$16.00

VOLTAGE DETECTOR

Features:

- Non-contact high voltage detector
- Wide detection range from 80V to 275kV; one instrument fits all applications
- Eight switch selectable voltage sensitivity ranges
- Digital filter rejects signals outside of 40 to 70 Hz
- Audible and visual indication of live voltage
- Self-test ensures that all system functions and indicators are working properly
- Universal spline adapter for hot stick connection
- Lightweight, minimizes sway at the end of long hot sticks
- Powered by three standard alkaline C cell batteries

Specifications:

Ranges: 240V, 2, 6, 11, 22, 33, 132, 275kV
 Detection: Range selected at 10" (25cm);
 45% to 65% of range at 4" (10cm);
 Greater detection distance obtained with
 lower range setting (higher sensitivity)
 than working voltage
 Operating Conditions: 5 to 130°F (-15 to 55°C); 0 to 93% RH
 @ 104°F (40°C)
 Weight: 17 oz (375g) including batteries



Model	Description	Price
2131.12	275HVD High Voltage Detector	\$469.00

AC VOLTAGE DETECTOR

Features:

- Connectionless AC voltage detector
- Capacitor checker
- Continuity checker
- Audible beeping signal increases in frequency when approaching live voltage
- Visual signal (**300HV**)
- Adaptable to hot stick

Three models to choose from:

Model 100: This easy-to-use instrument safely detects AC voltage without breaking into power lines or making any electrical connections. An audible computer-like beeping signals when the **Model 100** approaches live voltage. Excellent for checking fuse panels (without removing fuses), breaker panels, outlets and switches; determines live and dead wiring; locates breaks in insulated wires and heating elements; and checks for properly grounded power tools and appliances.

Model 300CC: The **300CC** does everything the **100** does plus it checks continuity up to 25,000Ω. It also checks capacitors from 1μF and up.

Model 300HV: The **300HV** offers all of the same features found in the **100** as well as high voltage testing. Unit is also adaptable to **Model 310** hot stick. High voltage ranges include: 1,500 to 122,000V. Low voltage ranges include: 25 to 1,500V.

Specifications:

Voltage Ranges (AC only):
100: 25V to 1,500V
300CC: 25V to 1,500V
300HV: Low: 25V to 1,500V
 High: 1,500V to 122,000V
 Charging Range: 1 μF/sec (**300CC**)
 Operating Temp.: 35° to 100°F (0° to 38°C)
 Dimensions: 8.5" x 3.75" x 1"(including probe)
 Weight: 12 oz.



Model	Description	Price
100/A	AC Voltage Detector	\$63.00
300CC	AC Voltage Detector	\$90.00
300HV	High-Low AC Voltage Detector	\$90.00
TIF310	Collapsible Hot Stick	\$70.00

VOLTAGE DETECTORS & PHASING TESTERS

Features:

- Voltage detectors in 7 models for systems to 550kV
- Continuous monitoring, no On/Off switch
- Conform to IEC guidelines
- Phasing testers in 5 models for up to 69kV systems; use on grounded or ungrounded AC systems

Ensure your safety by verifying the absence of voltage on a line or terminal of any grounded electrical system before you start work. Choose from six models that cover voltages from distribution class to transmission-line voltages up to 550kV. Features include flashing LEDs and piercing tone to warn of phase-to-ground voltages; self-test to confirm proper operation; and NASI C84.1 ratings, with conformance to IEC guidelines. Continuous monitoring means extra protection - you can't forget to turn the tester on.

Use the neon voltage detector for indoor testing of grounded AC systems. A bright neon bulb lights at a successful self-test before use, and again if there is live voltage during testing. Its 48" telescopic pole retracts to 354" for easy storage.

Analog phasing testers are ideal for outdoor testing of grounded and ungrounded systems, especially in areas where it's hard to see a neon indicator. You can check high-voltage fuses, test for correct phase connections, and confirm the absence of high voltage on de-energized lines or equipment.

Four models cover voltages up to 69kV. Lower voltage models come with poles with hand-guards, higher voltage models with an attachment for use with standard hot sticks.

Choose the neon phasing detector for easy visibility indoors or in poor lighting conditions. Its 43" long poles are connected by a flexible cable, which can span up to 7 feet between two energized phases under test. Hand guards provide safety.



Model 514360-1



Model 514440-1



Model 514500



Model 510836

Voltage Detectors

Model	Style	Voltage Range (phase to phase)	Min. Voltage (phase to ground)	Nominal Voltage (phase to phase)	Price
514440-1	Neon w/ 48" telescopic pole	3.6 to 36.5 kV	2.1 kV	4.16 to 34.5 kV	\$1050.00
514360-1	Electronic LED w/ 51" pole & audible	2.3 to 7.2 kV	1.2 kV	2.4 to 6.9 kV	\$1330.00
514360-2	Electronic LED w/ audible indicators	4 to 14.5 kV	2.3 kV	4.16 to 13.8 kV	\$1330.00
514360-3	spline fitted for attachment to a	11.7 to 36.2 kV	6.8 kV	12 to 34.5 kV	\$1330.00
514360-4	universal hot line pole	24.3 to 72.5 kV	14 kV	24.94 to 69 kV	\$1330.00
514242-1		67 to 235 kV	38 kV	69 to 230 kV	\$1900.00
514242-2		200 to 550 kV	115 kV	230 to 500 kV	\$1900.00

Phasing Testers

Model	Style	Nominal Voltage	Mechanical Style Between Poles	Pole Length	Cable Length	Price
510836	Neon	16 to 34.5 kV	2 fixed length poles w/ hand guards	43"	59"	\$1650.00
514500-1	Analog	2.4 to 6.9 kV	2 fixed length poles w/ hand guards	39"	59"	\$3380.00
514500-2	Analog	6.9 to 34.5 kV		56"	59"	\$3380.00
514500-3	Analog	34.5 to 69 kV	Spline fitted for attachment to a	52"	59"	\$3600.00
514500-4	Analog	6.9 to 34.5 kV	universal hot line pole	33" + hook	9'	\$3900.00

HOT STICKS



These low-prices testers, available in almost any desired maximum voltage, permit safe testing of bare high voltage bus bars. Operation is simplicity itself: The operator grasps two conveniently shaped handles, directs the metal hooks at the extremities of the prods against the bus bars to be read (or to ground if desired), and the voltage is indicated on the meter.

The meter is conveniently located, and tilted downwards, for easy direct reading to $\pm 5\%$ or better. The insulated probes are capable of withstanding a proof voltage of 35kV for each 10cm of probe length. The two probes are interconnected by 120cm of flexible high voltage cable capable of withstanding 85kV. One prod terminates in a hook, the other in a spike.

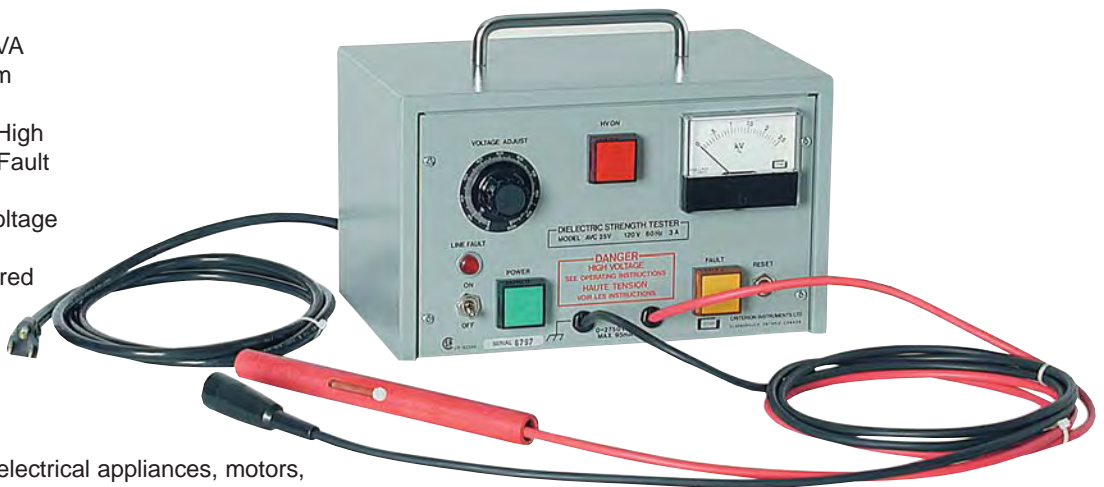
Model	Max. Reading	Insulator Length	Price
HS-15	15 kV	75 cm	\$1470.00
HS-25	25 kV	75 cm	\$1550.00
HS-35	35 kV	75 cm	\$1650.00
HS-50	50 kV	115 cm*	\$1940.00

* 2-section handle separates for easy storage.

DIELECTRIC STRENGTH TESTERS

Features:

- Input 120V, 60Hz rated at 500VA
- Adjustable output potential from 0 to 2500 VAC
- Indicator lamps for Power on, High Voltage on, Fault and Ground Fault
- Automatic cut-out
- Continuously indicating high-voltage voltmeter
- Safety device for incorrectly wired outlet
- Ground sensor
- Portable plug-in unit
- Heavy duty retractable prod



For dielectric strength testing of electrical appliances, motors, radios and electronic devices, the **Model AVC-25V** and **AVC-25VA** cover more than 75% of the requirements for the factory test required by the CSA and HEPC and UL. They are portable plug-in units rated at 500VA, suitable for equipment up to 75 H.P. or 50 kVA.

The **Model AVC-25V** and **AVC-25VA** have continuously adjustable output potential from zero to 2500V to cover practically all test voltages called up by CSA, HEPC and UL for breakdown testing. The instrument is equipped with large High Voltage, Power and Fault lamps, automatic cut-out, and continuously indicating high-voltage voltmeter, right across the test prods.

The test set incorporates a special AC line tester and ground sensor, which disables the test set unless the outlet into which it is plugged is correctly wired. If the ground is faulty or if the two AC power wires are reversed, the Dielectric Strength Tester will not operate, but a red warning light will go on, warning the operator that the wiring in his building is faulty.

Specifications:

Input: 120V, 60Hz, 3A
 Output: 0 to 2500 VAC; transformer rated @ 500VA; trip current set @ 95mA
 Voltmeter: 0 to 2.5kV, 2% accuracy
 Dimensions: 330 x 305 x 152cm (11 x 6.5 x 6.5")
 Weight: 7kg (15 lb)

Model	Description	Price
AVC25V	Dielectric Strength Tester	\$860.00
AVC25VA	Dielectric Strength Tester w/ mA indicator	\$950.00

CASES & HOLSTERS

Premium Cases

C510 Leather Meter Case

- Genuine Top Grain Cowhide
- Oil tanned for long life
- Rugged construction with heavy duty stitching and reinforced rivets
- Large tool belt loop and top flap to secure meter
- Holds most Fluke DMMs, Thermometers, and Process Calibrators

Price: \$64.00



C530 Leather Accessory Case

- Genuine Top Grain Leather
- Heavy duty zipper with convenient pull
- Ideal for storing Fluke leads, probes and other accessories
- Large enough to hold a meter plus accessories

Price: \$48.00



C520 Leather Tester Case

- Genuine Top Grain Cowhide
- Oil tanned for long life
- Rugged construction with heavy duty stitching and reinforced rivets
- Large tool belt loop and top flap to secure tester
- Holds Fluke Electrical Testers

Price: \$48.00



C550 Tool Bag

- Steel reinforced frame
- Rugged ballistic cloth with heavy duty hardware
- Large zippered storage compartment with 25 pockets
- Weather resistant
- Carry all your tools to the job

Price: \$99.00



Soft Cases

C12A Meter Case

- Zippered carrying case with inside pockets and belt loop

Price: \$25.00



C90 Meter Case

- Zippered carrying case with inside pocket and belt loop

Price: \$40.00



C25 Meter Case

- Zippered carrying case with padding and inside pocket

Price: \$41.00



C781/C125 Meter Cases

- Zippered carrying case with detachable external pouch

Model C781 Price: \$64.00

Model C125 Price: \$46.00



C50 Meter Case

- Zippered carrying case with inside pocket, belt loop and inside meter strap

Price: \$33.00



C789 Meter & Accessory Case

- Large fabric carrying case with 3 compartments, removable handle and shoulder strap

Price: \$132.00



C75 Accessory Case

- Zippered carrying case with 2 inside pockets

Price: \$20.00



Hard Cases

C20 Meter Case

- Heavy duty case with carrying handle and accessories storage compartment
- Top cover snaps onto back to serve as tilt stand

Price: \$48.00



C100 Meter and Accessory Case

- Tough polypropylene case
- Holds any Fluke DMM or digital thermometer and most accessories

Price: \$48.00



C800 Meter and Accessory Case

- Tough polypropylene case
- Holds many of the Fluke DMMs or digital thermometers
- Accessories and manual compartments
- Detachable lid

Price: \$45.00



MULTIMETER ACCESSORIES

AC-006 AC Line Splitter

- Enables clamp meter user to measure AC current on a 2-wire or 3-wire power cord to 15A
- Provides easy & safe measurements of current without the need to cut off the plug and separate the conductors
- Plugging the power connector into the Line Splitter separates the hot/live conductor from the neutral and ground
- Voltage check function
- Dimensions: 5.2 x 2 x 1 1/133 x 51 x 25mm
- Weight: 5.8 oz/164 g

Price: \$20.00



AD-1 Input Adapter

- Converts a type K probe with a mini connector to standard 3/4" banana jacks

Price: \$12.00



Carrying Cases

- Protect & store your multimeter & accessories in a fabric carrying case

Model CA-03

Dimensions: 8 x 4.75 x 2.5" (205 x 120 x 64mm) (approx.)

Price: \$18.00

Model CA-05A

Dimensions: 8 x 5.25 x 2.5" (250 x 130 x 65mm) (approx.)

Price: \$21.00

Model CA-52A

Dimensions: 8 x 3.5 x 2.25" (205 x 90 x 57mm) (approx.)

Price: \$15.00



Model CA-03



Model CA-52A



Model CA-05A

K Type Thermocouple Probes

Model LS-109 Surface Probe, Ribbon style (752°F/400°C)

Price: \$78.00

Model LS-139 Surface Probe, Spring-loaded tip (932°F/500°C)

Price: \$88.00

Model LS-104 Surface Probe, Right angle style (752°F/400°C)

Price: \$98.00

Model LS-103 Air/Gas Probe (1472°F/800°C)

Price: \$88.00

Model LS-107 General Purpose Immersion Probe (1292°F/700°C) **Price: \$78.00**

Model LS-134A Needle Tip Penetration Probe (1472°F/800°C)

Price: \$78.00

Model TP-01 Naked Bead Probe (500°F/260°C)

Price: \$19.00



TEST LEADS & ACCESSORIES

582 Safety Test Leads

The tip on this lead is made of .080" dia. x 1/2" long brass tip threaded 8-32 for attachments (nickel plated). The probe is molded flame retardant ABS plastic with a 3/4" safety ring. The wire is 18 ga. (65 x 36) tinned copper stranding, rubber insulation .145" dia. 20kV breakdown 5kV working. Standard length is 4 feet. Sold as sets (1 red, 1 black).

Features:

- Rated 1000V, 10A
- Tapered strain relief
- Brass tip, 8-32 threads
- Probe is molded flame retardant ABS plastic with a 3/4" safety ring

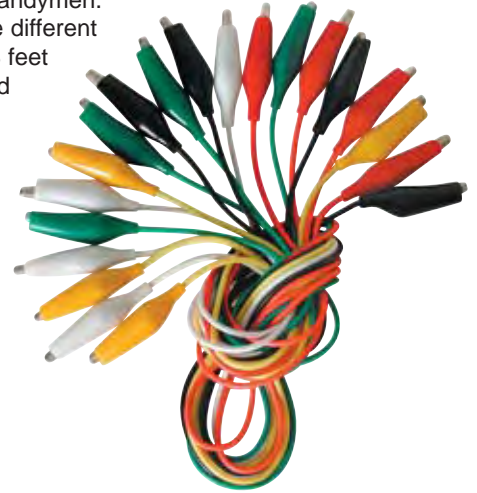
Price: \$22.00



833 Multi Mini Clip Lead Set

A good quality lead for an economical price. Very useful for most handymen. Includes 2 each of five different colored, 24 ga. wire, 3 feet long, and has clips and boots on both ends.

Price: \$9.00



581 Safety Test Leads

The tip on this lead is made of .080" dia. x 1/2" long brass tip threaded 8-32 for attachments (nickel plated). The probe is molded flame retardant ABS plastic with a 3/4" safety ring. The wire is 18 ga. (65 x 36) tinned copper stranding, rubber insulation .145" dia. 20kV breakdown 5kV working. Standard length is 4 feet. Sold as sets (1 red, 1 black).

Features:

- Rated 1000V, 10A
- Tapered strain relief
- Brass tip, 8-32 threads
- Probe is molded flame retardant ABS plastic with a 3/4" safety ring

Price: \$23.00



518-6 Safety Test Leads

The tip on this lead is made of .080" dia. x 5/8" long stainless steel with polished tip for insulation piercing. Threaded 8-32 for attachments (nickel plated). The probe is molded flame retardant ABS plastic with a 3/4" safety ring. The wire is 18 ga. (65 x 36) tinned copper stranding, rubber insulation .145" dia. 20kV breakdown, 5kV working. Standard length is 4 feet. Sold as sets (1 red, 1 black)

Price: \$22.00



458-1 Threaded Alligator Clip

This 8-32 threaded clip attaches directly onto any test lead probe tip with matching threads and allows the user to attach the lead to any wire or terminal. Material: Steel, cadmium plated, threaded 8-32, PVC boot. Sold as sets (1 red, 1 black)

Price: \$4.00



497-3 Threaded Hook-It

Attaches directly onto any test lead probe tip with matching threads, and allows the user to attach lead to any small connector.

Material: .028" dia. silver coated beryllium wire with brass nickel plate insert and nylon housing. Sold as sets (1 red, 1 black).

Price: \$10.00



TEST LEADS, PROBES & CLIPS

SureGrip™ Accessories

- SureGrip™ accessories provide a reliable grip in slippery hands
- Superior gripping surface made from thermo-plastic rubber
- Rubber-overmolded surfaces and finger hugging curves give the user a comfortable, steady hold
- New design makes clips, hooks and probes more versatile
- Dual rated for electrical safety

Probe Accessory Set

L210 Probe Light & Probe Extenders

- 8" probe extenders fit modular test probes
 - Probe and extender length complies with NFPA recommendations
 - Bright white LED illuminates contact area
 - Probe light fits on extender or test probe
- Price: \$40.00**



Modular Clips

AC220 SureGrip™ Alligator Clips

- Insulated, nickel plated jaws grip objects up to 3/8"
 - Blunt tip grabs round screw heads
 - Cat. III, 1000V, CAT. IV 600V, 10A rating
- Price: \$37.00**



AC280 SureGrip™ Hook Clips

- Profile narrows to .22" at tip
 - Nickel plated pincers open to .20"
 - Cat. III, 1000V, Cat. IV 600V, 1A rating
- Price: \$32.00**



AC283 SureGrip™ Pincer Clips

- 4.5" flexible insulated shaft
 - Nickel plated pincers open to 0.2"
 - Cat. III 1000V, Cat. IV 600V, 1A rating
- Price: \$37.00**



Modular Test Leads and Test Probes

TL221 SureGrip™ Silicone Test Lead Extension Kit

- Superior strain relief
 - Includes two adapters to extend leads 1.5m
 - Cat. III 1000V, CAT. IV 600V, 10A rating
- Price: \$29.00**



TL222 SureGrip™ Silicone Insulated Test Leads

- Recommended for use with AC220, AC280 & AC283 test clips
 - Superior strain relief
 - Cat. III 1000V, CAT. IV 600V, 10A rating
- Price: \$29.00**



TL224 SureGrip™ Silicone Insulated Test Leads

- 1.5m silicone-insulated wire resists heat and cold
 - Superior strain relief
 - Cat. III 1000V, CAT. IV 600V, 10A rating
- Price: \$29.00**



TL27 Heavy Duty Test Leads

- Rugged EPDM insulation
 - 1.5m long with shrouded, straight connectors and excellent strain reliefs on each end
 - Cat. III 1000V, CAT. IV 600V, 10A rating
- Price: \$32.00**



AC285 SureGrip™ Alligator Clips

- Multi-purpose tooth pattern grips anything from fine gauge wire to a 3/4" nut
 - Nickel plated steel jaws
 - Cat. III 1000V, Cat. IV 600V, 10A rating
- Price: \$21.00**



AC87 Heavy Duty Bus Bar Clips

- Plunger style, safety grip operation with insulated, right angle jaws
 - Adjustable jaws open to grip flat bus bars or round conductors
 - Cat. III 600V, 10A rating
- Price: \$37.00**



TP1, TP2, TP4 & TP38 Slim Reach Test Probes

- Slender probe bodies for probing closely spaced or recessed points
 - Cat. III 1000V, 10A, Cat. IV 600V, 10A
 - **TP1** has a flat blade ideal for electrical wall sockets
 - **TP2** has 2mm diameter tip for precise electronic probing
 - **TP4** has 4mm diameter probe tip ideal for European electrical wall outlets
 - **TP38** has stainless steel probe insulated to 4mm from end
- Price: \$16.00**



TP220 SureGrip™ Industrial Test Probes

- Sharp 1/2" stainless steel tip provides reliable contact
 - Flexible finger barrier improves grip
 - Cat. III 1000V, CAT. IV 600V, 10A rating
- Price: \$16.00**



TP74 Lantern Tip Test Probes

- Tips include banana-style spring contacts with nickel-plated brass ends
 - Ideal for probing banana plug receptacles
 - Cat. III 1000V, 10A, Cat. IV 600V, 10A rating
- Price: \$16.00**



AC72 Alligator Clips

- Slide-on style for test probes
 - Jaws open to 8mm
 - Cat. III 1000V, Cat. IV 600V, 10A rating
 - Use with TL75 and TL71 test leads
- Price: \$14.00**



AC89 Heavy Duty Insulation Piercing Clips

- Plunger style, safety grip operation with insulated jaws
 - Small pin pierces 30 to 14 AWG insulated wire
 - Cat. III 1000V, 5A, Cat. IV 600V, 5A rating
- Price: \$37.00**



TEST LEADS, PROBES & CLIPS

Test Lead & Probe Sets

TL81A Deluxe Electronic Test Lead Set



- 22 piece set with quadfold pouch
 - Includes mini alligator clips, hooks and pinners for virtually every electronic need
 - Slide-on IC probe tip adapter and test lead couplers
 - Both modular test leads and lead probe combinations
 - Cat. II, 300V
- Price: \$158.00**

TL80A Basic Electronic Test Lead Set

- 6 piece set with zippered case
 - Probes, alligator clips and tip extenders
 - Cat. II, 300V rating
- Price: \$64.00**



TL220 Industrial Test Lead Set

- Starter kit for industrial applications
 - TP220 has round stainless steel tip
 - Includes 1 pair: AC220, TP220, TL222
 - Cat. III, 1000V, Cat. IV 600V, 10A rating
- Price: \$72.00**



TL223 Electrical Test Lead Sets

- Starter kit for electrical applications
 - TP1 has flat blades for wall sockets
 - Includes 1 pair: AC220, TP1, TL224
 - Cat. III, 1000V, Cat. IV 600V, 10A rating
- Price: \$72.00**



TL71 Premium DMM Test Lead Set

- Flexible silicone insulated leads are heat and cold resistant
 - Distinctive comfort grip probes
 - Recommended for uV measurements
 - Cat. III 1000V, Cat. IV 600V, 10A rating
- Price: \$24.00**



TL40 Retractable Probe Assembly

- Retractable, insulated sharp tip probe
 - Cat. II, 300V, 2A rating
- Price: \$43.00**



TL26A Telecom Test Lead Set

- 5-way multipoint test clips for telecommunications applications
 - Flexible silicone insulated leads are heat and cold resistant
 - Cat. I, 30V, 8A rating
- Price: \$56.00**



TL28A Automotive Test Lead Set

- Large, solid copper alligator clips with 0.5" opening
 - Flexible silicone insulated leads are heat and cold resistant
 - Cat. I, 30V, 10A rating
- Price: \$40.00**



TL76 2mm/4mm Test Lead Set

- 2mm threaded probes with removable 4mm banana-style spring contacts
 - Flexible 1.5m silicone leads
 - Cat. III, 1000V, Cat. IV 600V, 10A rating
- Price: \$32.00**



TL75 Hard Point™ Test Lead Set

- Extremely hard alloy tips resist wear
 - Distinctive comfort grip probes
 - Cat. III 1000V, 10A; Cat. IV 600V, 10A
- Price: \$21.00**



High Voltage Probes

80K-6, 80K-15, 80K-40 High Voltage Probes

- Allows a DMM to measure up to 6000V peak, 15,000V peak and 40,000V peak respectively
- 1000:1 division ratio output when connected to 10MΩ multimeter
- Ground clip included
- Intended for low energy applications that are referenced to ground



- | | | |
|---------------------|---------------|-----------------|
| Model 80K-6 | Price: | \$110.00 |
| Model 80K-15 | Price: | \$237.00 |
| Model 80K-40 | Price: | \$205.00 |

TL910 Electronic Test Probes with Replacement Tips

- Small profile provides flexibility
 - Comes with 5 sets of replaceable tips (TP912)
 - Rated Cat. III, 1000V, 3A
- Price: \$64.00**



TP80 Electronic Test Probes

- Tapered tip for probing electronic components or boards
 - Removable guard for IC probing
 - Rated Cat. III, 1000V, 10A
- Price: \$32.00**



TP920 Test Probe Adapter Kit

- IC test tip adapters, extended tips, medium alligator clips fit over TL71 and TL75 test lead sets
 - IC Test Tip Adapter, 3A
 - Extended Probe Tip, 3A
 - Medium Alligator Clip, 5A
 - Rated Cat. II, 300V
- Price: \$40.00**



TL930 (24") & TL932 (36") Patch Cords (1 pair)

- Multi-stacking banana plug patch cords
 - Banana plugs have nickel-plated finish
 - 30Vrms, 60Vdc, 15A
- TL930 Price: \$16.00**
TL932 Price: \$18.00



TL935 Patch Cord Kit (3 pairs)

- 24", 36" and 48" multi-stacking banana plug patch cords
 - Banana plugs have nickel-plated finish
 - 30Vrms, 60Vdc, 15A
- Price: \$45.00**



TL940 Multistacking Banana Plug to Mini-Hook

- Mini-hooks attach to component leads up to 0.060" in diameter
 - 36" PVC insulated leads
 - 30Vrms, 60Vdc, 15A
- Price: \$16.00**



TL970 Hook & Pincer Kit

- Handy all-in-one kit
 - Includes TL940, TL950, TL960
- Price: \$91.00**



H900 Test Lead Holder

- Heavy duty construction with mounting holes
 - 10 slots for wires up to 0.320" in diameter
 - Dimensions: 11"L x 3.5"W x 1.25"H
- Price: \$24.00**



TEST LEAD ACCESSORY KITS

Model 6162 Basic Test Companion™ Kit

Includes tri-fold style Cordura pouch and IEC1010-compliant test accessories listed: Test probe handle set with .080 notched tip, flexible test lead set, straight to straight banana plug, medium alligator clip set, insulated spade lug set®.



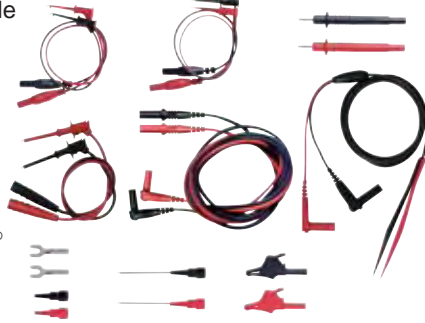
Model 6172 - Test Companion™ Kit

Includes shoulder pack style Cordura carrying case and IEC1010 - compliant test accessories listed: Test probe handle set with banana plug, medium alligator clip set, insulated spade lug set, Maxigrabber® test clip set with pincer tip, Maxigrabber® test clip set with hook tip, extra durable probe lead set.



Model 6174 - Test Companion™ Kit

Includes shoulder pack style Cordura carrying case and the following test accessories: Medium alligator clip set, flexible test lead set, pop jack to multimeter plug, male to male, solid tip test probe with pop jack, Minigrabber® test clip to pop jack (female), extended tip, IC test tip adapter, spade lug with jack, Micrograb-ber® test clip to pop jack, SMD grabber test clip to pop jack, SMD test tweezer to sheathed banana plugs.



Model	Description	Price
6162	Basic Test Companion™ Kit	\$64.00
6172	Test Companion™ Kit	\$137.00
6174	Test Companion™ Kit	\$145.00

Banana Plugs

MODEL 2BC - MULTI-STACKING DOUBLE BANANA PLUG CABLES

Rating: 1400 Vrms, 15A, 55°C (131°F) max., RG, 58C/U, 1.95" O.D.



MODEL 3786C - MULTI-STACKING DOUBLE BANANA PLUG TO MINIGRABBER® TEST CLIPS

Rating: 45 VAC, 50°C (122°F) max., Cable type: RG, 58C/U, 1.95" O.D.



Model	Description	Price
2BC-24	Double Banana Plug Cable, 24"	\$21.00
2BC-36	Double Banana Plug Cable, 36"	\$22.00
3786-C-24	Double Banana Plug to Minigrabber, 24"	\$21.00
3786-C-36	Double Banana Plug to Minigrabber, 36"	\$21.00

Model 5907A - Flexible Test Lead Set, Right Angle to Straight Banana Plug

- Conforms to IEC1010 standards
- Right angle sheathed banana plug to straight sheathed banana plug on 48" long silicone wire. Set of 2 leads, one black, and one red.
- Rating: 1000 Vrms, 10A, Cat. III, P2



Model 5898 - Probe Lead Sets

- Set of two 48" long silicone insulated leads, one black and one red
- Features stainless steel tip, excellent for penetrating oxidation or conformal coating
- Fits most Fluke, Tektronix, HP and Wavetek meters



Model	Description	Price
5907A	Flexible Test Lead Set,	\$16.00
5898	Probe Lead Sets, Extra Durable Tip	\$16.00

Patch Cords (select red or black)

MODEL B - STACKING BANANA PLUG

Stacking banana plug on each end. 18 AWG, PVC insulated, 144" O.D. wire. Rating: 5000 VDC, 15A, 55°C (131°F) max.



MODEL AL-B - ALLIGATOR CLIP

Alligator clip opens to 0.300". Vinyl boot. 18 AWG, PVC insulated 144" O.D. wire. Rating: 150 VDC, 5A, 50°C (122°F) max.



MODEL 4911A - RETRACTABLE SHEATH BANANA

18 AWG, PVC insulated, 144" O.D. wire. Rating: 1000 V, 7A, 80°C (176°F) max.



MODEL 1166 - ALLIGTOR CLIP TO STACKING BANANA

Alligator clip opens to 0.300". 18 AWG, PVC insulated, 144" O.D. wire. Rating: 150 VDC, 5A, 50°C (122°F) max.



Model	Description	Price
B-36-0	Stacking Banana Plug, 36", Black	\$6.00
B-36-2	Stacking Banana Plug, 36", Red	\$6.00
B-48-0	Stacking Banana Plug, 48", Black	\$7.00
B-48-2	Stacking Banana Plug, 48", Red	\$7.00
AL-B-36-0	Alligator Clip, 36", Black	\$7.00
AL-B-36-2	Alligator Clip, 36", Red	\$7.00
AL-B-48-0	Alligator Clip, 48", Black	\$7.00
AL-B-48-2	Alligator Clip, 48", Red	\$7.00
4911A-36-0	Retractable Sheath Banana, 36", Black	\$14.00
4911A-36-2	Retractable Sheath Banana, 36", Red	\$14.00
4911A-48-0	Retractable Sheath Banana, 48", Black	\$14.00
4911A-48-2	Retractable Sheath Banana, 48", Red	\$14.00
1166-36-0	Alligator Clip to Stacking Banana, 36", Black	\$7.00
1166-36-2	Alligator Clip to Stacking Banana, 36", Red	\$7.00
1166-48-0	Alligator Clip to Stacking Banana, 48", Black	\$7.00
1166-48-2	Alligator Clip to Stacking Banana, 48", Red	\$7.00

INDUSTRIAL TEST LEADS

Model FC-108 Basic Test Leads

- ø4mm safety test leads
- Silicone insulated
- 100cm long
- Right angle sheathed banana plug to straight sheathed banana plug
- Set of two, one black and one red
- **To be used in conjunction with items listed below**



Model FC-A23 Safety Alligator Clips



Model FC-28 Basic Test Clips

- Push-on safety test clips with strong jaws
- Insulated, nickel plated jaws grip objects up to 3/8"
- Blunt grip grabs round screw heads



Model FC-105 Basic Test Probes

- Tips include banana-style spring contacts with nickel-plated brass ends
- Ideal for probing banana plug receptacles



Model FC-105A Safety Test Probes

- Push-on safety test probes with stainless steel tips
- Rigid with protective caps



Model FC-170A Safety Test Probes

- Industrial test probes with stainless steel tips



Model FC-178A Safety Jaw Clips



Model FC-A18 Electronic Test Probes

- Tapered tips for probing electronic components or boards
- Removable guard for IC probing steel tips



Model	Description	Price
FC-108	Basic Test Leads	\$16.00
FC-A23	Safety Alligator Clips	\$12.00
FC-28	Safety Test Clips	\$28.00
FC-105	Basic Test Probes	\$10.00
FC-105A	Safety Test Probes	\$10.00
FC-170A	Safety Test Probes	\$16.00
FC-178A	Safety Jaw Clips	\$16.00
FC-A18	Electronic Test Probes	\$4.00

Model TL-88-1 Safety Test Leads

- Set of two 48" long leads, one black and one red
- Flexible silicone insulated safety test leads are heat and cold resistant
- Distinctive comfort grip test probes with stainless steel tips



Model FC-A15 Safety Alligator Clips

- Slide-on style for test probes
- Jaws open to 8mm



Model TL-88-A15 Safety Test Leads

- Same as above with FC-A15 alligator clips



Model	Description	Price
TL-88-1	Safety Test Leads	\$16.00
FC-A15	Safety Alligator Clips	\$4.00
TL-88-A15	Safety Test Leads w/ Alligator Clips	\$19.00

Model FC-108G Safety Test Lead Kit

- FC-108 safety test leads
- FC-A23 alligator clips
- FC-105A test probes
- C-80 carrying case



Model FC-A23G Deluxe Safety Test Lead Kit

- TL-88-1 safety test leads
- FC-108 safety test leads
- FC-A15 alligator clips
- FC-A23 alligator clips
- FC-A18 electronic test probes
- FC-105 test probes
- FC-105A test probes
- FC-170A industrial test probes
- FC-178A safety jaw clips
- FC-28 test clips
- C-820 carrying case



Model	Description	Price
FC-108G	Safety Test Lead Kit	\$49.00
FC-A23G	Deluxe Safety Test Lead Kit	\$139.00

MULTIMETER ACCESSORIES

I.T.M.'s DMM adapters convert measurements to a 1 millivolt per count linear output signal which can be displayed on any digital multimeter or recorder with a 200mV or 2V range. Six adapter types are available and all include standard banana plugs which fit into a multimeter's common and voltage sockets.

Model TA-601 Tachometer Adapter

Specifications:

Range: **A:** 100 - 1,999 RPM
 B: 1,000 - 19,990 RPM
Resolution: **A:** 1 RPM
 B: 10 RPM
Accuracy: $\pm(1.2\% + 2 \text{ digits})$
Output: **A:** 0.1 mV DC per 1 rpm
 B: 0.1 mV DC per 10 rpm
Target Distance: 2 to 12"



Model HA-201 Humidity Adapter

Specifications:

Range: 10% to 95% R.H.
Resolution: 1% R.H.
Accuracy: $\pm(3\% + 1\text{mV}) @ 25^\circ\text{C}$
Output: 1mV DC per 1% R.H.
Ambient Temp.: 0° to +50°C
Ambient R.H.: Less than 95% R.H.



Model K6030 Anemometer Adapter

Specifications:

Range: 0.2 - 40.0 m/s;
 0.7 - 144.0 km/h;
 40 - 7870 ft/min;
 0.4 - 77.7 knots
Output: m/s: 1mV per 1 m/s;
 km/h: 1mV per 1 km/h;
 ft/min: 1mV per 100 ft/min;
 knots: 1mV per 1 knot
Accuracy: $\pm(2\% + 0.1 \text{ mV})$



Model HA-702 Humidity Adapter

Specifications:

Range: 10% to 95% R.H.
Accuracy: $\pm(3\% + 1 \text{ mV})$
Output: 1 mVdc per 1% H.R.



Model EMF-824

EMF Adapter

Specifications:

Range: 0.1 to 199.9 mGauss,
 0.01 to 19.99 μTesla
Accuracy: $\pm 4\%$ to 50/60 Hz
Output: 1.0 mV DC per 1 mGauss
 (0.1 μTesla)
Bandwidth: 30 to 300 Hz



Model K5070 AC/DC Clamp-on Adapter

Specifications:

Range: 0 to 200A, 400A
Resolution: 0.1A, 1A
Accuracy: $\pm(1.8\% + 2 \text{ dgt}) \text{ f.s.}$
O/L Protection: 1000A (within 1 min)
Test Frequency: 50/60 Hz
Output: 1.0 mV AC/DC
 per 1.0 A AC/DC
Jaw Opening: 1-1/2"



Model DH802C Temperature Adapter

Specifications:

Range: -50 to 500°F
Accuracy: $\pm 3\%$



Model CA-202 AC/DC Clamp-on Adapter

Specifications:

Range: 0 to 200 A AC/DC,
 0 to 2000 A AC/DC
Accuracy: $\pm 2\%$ up to 200 A,
 $\pm 3\%$ up to 1500 A
 with push button zero
Output: 1 mV per 1 A
Jaw Opening: 2.5" (64 mm)



Model K1030 Light Adapter

Specifications:

Range: 0 to 50,000 Lux
Accuracy: $\pm 5\%$



Model	Description	Price
TA-601	Tachometer Adapter	\$195.00
K6030	Anemometer Adapter	\$232.00
EMF-824	EMF Adapter	\$129.00
DH802C	Temperature Adapter	\$105.00
K1030	Illuminometer Adapter	\$112.00
HA-201	Humidity Adapter	\$229.00
HA-702	Humidity Adapter	\$229.00
K5070	AC/DC Clamp-on Adapter	\$169.00
CA-202	AC/DC Clamp-on Adapter	\$152.00

PRESSURE/VACUUM MODULE

The **Fluke PV350** sets the standard for pressure/vacuum troubleshooting. It turns your digital multimeter into a complete measuring system, adding digital pressure and vacuum measurements to your existing capabilities. This compact module plugs into standard diameter banana jacks on the front of your DMM and measures hydraulic and pneumatic pressures up to 350 psi. Flip the switch and you can measure vacuum to 29.99" Hg. All with one module.



Specifications:

	Range	Accuracy
Pressure:	.5 to +350 psi (3.447 to +241113kPa)	±1% rdg. (±0.3 psi) ±1% rdg. (±2.1 kPa)
Vacuum:	0-29.99" HG (0-76 cm Hg)	±1% rdg. (±0.5" Hg) ±1% rdg. (±1.3 cm Hg)
Resolution:	Accuracy specification requires the module to be zeroed prior to taking the reading.	
Resolution:	0.1 psi/inch Hg in V range, 1 psi/inch Hg in Volt range (with 3-1/2 or 4 digit multimeter)	
RF Field Derating:	Typically < 1% error from 14 kHz to 30 MHz at 1 V/M	
Working Pressure:	350 psi max.	
Burst Pressure:	1000 psi	

Model	Description	Price
PV350	Pressure/Vacuum Module	\$428.00
C25	Carrying Case	\$41.00

FIBER OPTIC TESTERS

Single Cable Loss Test

To measure total power loss, connect a **Fluke FOS** to one end of the cable, and a DMM to the other. Then reverse the source and the meter to complete the bi-directional test. The highest number is used to evaluate system performance.

Duplex Cable Loss Test

Here's how to test two cables at once without two sources and meters. It's similar to the Single Cable Loss Test, except that you connect a jumper across two cables at one end; then connect the source and a DMM to the two cables jumpered together at the other end with a **FOM** patch panel.

Transmitter Power Test

Connect a DMM via a jumper cable to the transmitter output. Turn on the transmitter and measure its output power; check the results against manufacturer specifications.

Receiver Power Test

Disconnect the receiver and put a DMM in its place. Turn on the transmitter and measure the power at the receiver. Now you've got the test data to determine whether the power at the receiver is within system specifications.



Model FOS-850/1300



Model FOM

Model	FOS-850	FOS-1300	FOS850/1300
Wavelength	85nm ± 30nm	130040/+50nm	850nm/1300nm ±30nm/-40/+50nm
Output Power	-20dBm	-20dBm	-20dBm
Connector	ST	ST	ST
Stability	±0.2dB per 8 hours	±0.2dB per 8 hours	±0.2dB per 8 hours
Battery Type		9V alkaline	9V alkaline
Operating Temp/RH	32° to 104°F, up to 75% RH		
Output	1mV per 1 dB		
Application Range	800-1600nm		
Acceptable Fiber Types	9/125 to 100/140µm		
Operating Range	+3 to -50 dBm		
Relative Accuracy	±0.15dB		
Repeatability	±0.4dB		

Model	Description	Price
FOM	Fiber Optic Meter	\$476.00
FOS-850	Fiber Optic Source	\$317.00
FOS-850/1300	Fiber Optic Source	\$795.00
FOC-ST/FC	Fiber Optic ST to FC Jumper Cable	\$78.00
FOC-ST/SC	Fiber Optic ST to SC Jumper Cable	\$62.00
FOC-ST/SMA	Fiber Optic ST to SMA Jumper Cable	\$88.00
FOC-ST/ST	Fiber Optic ST to ST Jumper Cable	\$51.00

CURRENT CLAMP-ON ADAPTER



Features:

- Ideal tool to extend the current range for all multimeters
- AC Current Range: 200A
- Voltage output of 1 mV/A via standard banana inputs

Model	Description	Price
CP-09	Current Clamp-on Adapter	\$35.00

CURRENT LEAKAGE PROBE

Features:

- Works on grounded single- and three-phase networks
- Works on high current circuits
- Extremely sensitive clamp-on ammeter measures as low as 500 μ A ac leakage of differential current
- Measures current to 200A ac
- Large aperture CT (3.9") clamps directly onto conductors without disrupting service
- Locates fault by direct measurement of fault current
- Ideal for preventative maintenance - avoid shut down and costly failures

Specifications:

Range	5A:	500 μ A to 6A;
	200A:	500mA to 200A
Accuracy	5A:	500 μ A to 10mA: 3% rdg. + 1mA;
		10mA to 4A: \pm 0.5% rdg. + 0.5mA;
	200A:	0.5A to 10A: \pm 0.5% rdg. + 0.5mA;
		10A to 200A: \pm 0.5% rdg. + 0.5mA;
		200A to 400A: \pm 0.5% rdg. + 1mA
Output Signal	5A:	1mV/mA (6V max);
	200A:	1mV/mA (400mV max)
Input Impedance	5A:	\geq 1M Ω ;
	200A:	\leq 1k Ω



Model	Description	Price
1201.42	2610 Current Leakage/Insulation Probe	\$1072.00

CURRENT PROBE

The i2000flex is a flexible, AC current probe for oscilloscopes and digital multimeters recommended for current measurement on large and difficult to reach conductors.

Features:

- Maximum current measurement rating is 2000A AC
- Switchable between 200A and 2000A
- Includes a 62 cm (24.4") circumference probe with a connector for coupling and decoupling around a conductor
- Includes BNC connector, making it suitable for use with any oscilloscope, power analyzer or ScopeMeter test tool having a compatible BNC input connector
- Dual banana to BNC adapter is included for use with DMMs
- Cat III 600V
- The output signal is 10 mV/A in 200A range and 1 mV/A in the 2000A range
- 9V alkaline battery installed
- At least 100 hour battery life



Model	Description	Price
i2000flex	Flexible AC Current Probe	\$406.00

AC/DC CURRENT CLAMPS



Features:

- Rugged enough to survive a six foot drop
- Jaws accept conductor size of 1 x 750 MCM (30 mm/1.18 in. dia.) or 2 x 500 MCM (2 x 25 mm/.98 in)
- DC current zero control for nulling out jaw/sensor offset
- Superior noise immunity allows measurement in electrically noisy environments, such as adjustable speed drive line-side and load currents
- Shielded, heat resistant silicon rubber cable connects clamp to digital multimeter
- Battery check mode gives you fast information on battery
- For use with any multimeter with 1mV input

A new generation of Fluke AC/DC current clamp accessories offers advances in performance, noise immunity and durability. Basic measurement specifications such as accuracy, minimum current ranges and bandwidth (AC frequency response) have been improved. Both clamps can now measure ac or dc current down to 1 amp with specified accuracy and are usable to 0.5A. These accessories use the same form factor as Fluke's popular stand-alone 30 Series Clamp Meters. That means they're built rugged enough to withstand a six foot (two meter) drop, not to mention everyday wear and tear. The "safety yellow" color stands out on the job or in your toolbox. A new connector cable takes advantage of heat resistant properties of silicon, and is shielded for excellent noise immunity. You can even take measurements on notoriously noisy loads, such as motor drives.

Model	Description	Price
i410	AC/DC Clamp Adapter, 400A	\$245.00
i1010	AC/DC Clamp Adapter, 1000A	\$405.00

Specifications:

Model	i410	i1010	Comments
DC Current Range	1 to 400A DC	1 to 1000A DC	i410/i1010 are both usable to 0.5A, DC or AC, but accuracy is not specified below 1A
DC Accuracy	±(3.5% rdg. + 0.5A)	±(2.0% rdg. + 0.5A)	Specs apply over entire range, zero-adjusted, conductor centered
AC Current Range	1 to 400A AC rms	1 to 600A AC rms	With a true-rms meter, the minimum AC current is limited to the low end of the specified mV AC range
AC Accuracy	±(3.5% rdg. +0.5A)	±(2.0% rdg. + 0.5A)	Applies over entire range, assumes CF ≤ 3
Crest Factor @ max. AC range	≤3 @ 400A ≤6 @ 200A	≤3 @ 600A ≤6 @ 300A	At max. AC range, CF ≤ 3. At half-range, max. CF tolerance increases to ≤6
Frequency Response	3 kHz	10 kHz	Clamp should not be used on a circuit with frequency >400 Hz (i410) or >2 kHz (i1010)
Output Signal	1 mV/A	1 mV/A to meter	Hall effect sensor and amplifier circuit outputs 1 mV/A
Safety Ratings	IEC 1010, CAT III-600V	IEC 1010, CAT III-600V	Do not use clamp on power circuits exceeding 600V to ground
Load Impedance	≥1 MΩ, ≤100pF	≥1 MΩ, ≤100pF	Compatible with meters with input
Temperature	-10° to 50°C (14° to 122°F)		
Battery Type/Life	9V (alkaline)/60 hours continuous		
Dimensions	209 x 78 x 48 mm (3.09 x 8.21 x 1.87")		
Weight	0.5 kg (17.6 oz)		

CURRENT CLAMPS

Accurate current measurements are critical to resolving power quality problems in commercial and industrial power distribution systems. Fluke now offers three clamp-on AC current probes and one AC/DC current probe that boost the performance of any oscilloscope or voltage input device capable of millivolt measurements.

Model 80i-110s:

- Optional accessory for the *Fluke 39/41B* and for *Fluke ScopeMeter*® test tools
- Measures AC and DC current in 2 ranges fro 0 to 100A. The best accuracy is 3% and frequency response is DC to 100kHz.
- Rated for 600V Cat. II circuits and 300V Cat. III circuits

Model 80i-500s:

- An included accessory for the *Fluke 39* and *41B* Power Meters and an optional accessory for *ScopeMeter*® test tools
- AC current capacity of up to 500A RMS, with best accuracy of 2% from 45Hz to 65Hz
- Rated for 600 VAC Cat. III circuits and 300 VAC Cat. IV circuits

Model 80i-1000s:

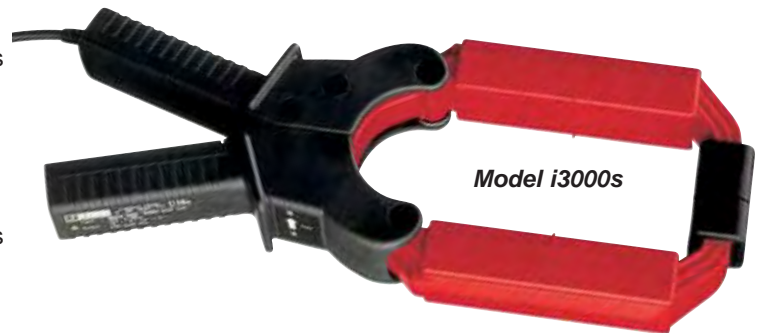
- An optional accessory for use with Fluke DMMs, PowerMeters and Scopemeter test tools
- Measures AC current from 1A to 2400A RMS continuous
- Rated for 600 VAC Cat. III circuits and 300 VAC Cat. IV circuits
- **PM9081/001** BNC to banana adapter included

Model i3000s:

- An optional accessory for use with Fluke DMMs, PowerMeters and Scopemeter test tools
- Measures AC current from 1A to 2400A RMS continuous
- Rated for 600 VAC Cat. III circuits and 300 VAC Cat. IV circuits
- **PM9081/001** BNC to banana adapter included



Model i1000s



Model i3000s

Specifications:

Function	80i-110s	80i-500s	i1000s	i3000s
AC Current Ranges	0.1A to 100A DC & AC RMS continuous (140A peak) 2 ranges: 0-10A & 0-100A	1A to 500A AC RMS (to 700A RMS for max. of 10 mins.)	0.1A to 1000A continuous (2000A peak)	1 to 2400A continuous (4000A RMS for max. of 5 mins.) 3 ranges: 1-30A, 1-300A, 1-3000A
Accuracy	0.05A to 100A, 3% rdg. DC to 5kHz, 12% rdg. from 5kHz-20kHz	100A to 500A, ±2% rdg.; 20A to 100A, ±5% rdg.; 1A to 20A, ±5% rdg. + 0.3A	0.5A to 1000A, 2% rdg.; 0.1A to 10A, 3% rdg. ±100mA	1-30A: 2% rdg. + 0.1A; 1-300A, 2% rdg. + 0.5A; 1-3000A, 2% rdg. + 2A
Frequency Range	DC to 100kHz	5Hz to 10kHz	5Hz to 100kHz	10Hz to 100kHz
Working Voltage	600V rms clamp jaws to ground	600V AC RMS clamp jaws to ground	600V AC RMS clamp jaws to ground	600V AC RMS clamp jaws to ground
Common Mode Voltage (Float Voltage)	600V DC or AC at output cable and connector to ground	600V AC RMS at output cable and connector to ground	600V AC RMS at output cable and connector to ground	600V AC RMS at output cable and connector to ground
Conductor Dia.	11.8mm	30mm	54mm	64mm (2.52"); max. bus bar:64 x 100mm (2.5 x 3.9")
Output Levels	10mV/A & 100mV/A	1mV/A	1mV/A, 10mV/A & 100mV/A	10mV/A, 1mV/A & 0.1mV/A
Output Cable	1.6m BNC termination. Cable & BNC rated to 600V RMS	1.6m BNC termination. Cable & BNC rated to 600V AC RMS	1.6m BNC termination. Cable & BNC rated to 600V AC RMS	2.1m BNC termination. Cable & BNC rated to 600V AC RMS (female BNC to banana adapter included)
Dimensions	36 H x 231 L x 67 W mm	196 L x 66 W x 33 D mm	206 L x 105 W x 48 D mm	310 L x 120 W x 48 D mm
Weight	330 g	420 g	650 g	1200 g
Price	\$651.00	\$271.00	\$565.00	\$646.00

CURRENT/ VOLTAGE/TEMPERATURE ACCESSORIES

80i-400 Clamp-On AC Current Probe

Measures AC current from 1A to 400A. 1000 to 1 division ratio. Maximum conductor size: one 1.18" (30 mm) or two 0.98" (25 mm). Accuracy: $\pm(3\% + 0.4A)$ from, 48 Hz to 440 Hz, $\pm(4\% + 0.4A)$ 440Hz to 1000Hz.



80i-600A Clamp-On AC Current Probe

Measures AC current from 1A to 600A. Division ratio 1000:1. Maximum conductor size 2" (50 mm) in diameter. Accuracy $\pm 2\%$, 50Hz to 1kHz, $\pm 3\%$ (typical) 30Hz to 10kHz.

80TK Thermocouple Module without Probe

Converts any 10M Ω DMM into a thermometer via standard banana plugs. Uses K-type thermocouple with mini-connectors. Switch selectable for $^{\circ}C$ or $^{\circ}F$. Use with interchangeable probes (one 80PK-1 bead probe included). Basic accuracy: $0.5\% \pm 2^{\circ}C$ ($0.5\% \pm 3.6^{\circ}F$).



Model	Description	Price
80i-400	Clamp-on AC Current Probe	\$151.00
80i-600A	Clamp-on AC Current Probe	\$205.00
80TK	Thermocouple Module without Probe	\$118.00



80K-40 High Voltage Probe

Measures up to 40kVDC or 28kV rms AC. Division ratio is 1000:1. Has 1000M Ω input resistance. DC accuracy: $\pm 1\%$ from 20kV to 30kV, changes linearly from 1% to 2% at 1kV. AC accuracy: Typically 1% lower than DC accuracy at 60 Hz.



80K-6 High Voltage Probe

Division ratio is 1000:1. Extends measurement capabilities to 6000VDC or peak AC. Accuracy: $\pm 1\%$ to 500Hz AC, $\pm 2\%$ 500Hz to 1kHz AC.



80T-150U Universal Temperature Probe

High accuracy P-N junction probe converts any DMM into a thermometer. Switch selectable for $^{\circ}F$ or $^{\circ}C$. Features 350VDC or peak AC isolation. Suitable for air, surface, and non-corrosive liquid measurement applications. Basic accuracy: $\pm 1^{\circ}C$ ($1.8^{\circ}F$), $0^{\circ}C$ to $100^{\circ}C$. Range: $-50^{\circ}C$ to $150^{\circ}C$ ($-58^{\circ}F$ to $302^{\circ}F$)

Model	Description	Price
80K-40	High Voltage Probe	\$205.00
80K-6	High Voltage Probe	\$110.00
80T-150U	Universal Temperature Probe	\$197.00

CURRENT MEASUREMENT PROBES

Features:

- Current ranges from 50µA to 30,000 Arms
- Measures both AC, DC and power quality features
- Used with DMMs, oscilloscopes, data loggers, handheld scopes and meters
- Voltage or current output
- Output connections; jacks, leads or BNC
- Flexible & fixed jaw models



Five questions for selecting the proper current probe:

- Is AC, DC or both to be measured?
- What current rating is needed?
- What is the conductor size to be clamped onto?
- Is mV or mA output required?
- What lead termination is needed? BNC (scope) Jack (accepts 4mm), or Lead (integral banana plug)?



AMPFLEX™ FLEXIBLE CURRENT PROBES



Features:

- Measure from 0.5Arms to 30,000Arms
- Lengths from 24" to 60" standard
- Accuracy 1% of Reading
- Shape Memory allows pre-forming before installation
- Very low phase shift error
- Single and dual range models standard

* Dimensions rounded off

Note: Output is safety shrouded 4mm male banana
Measurement range starts at 0.5A for all flexible probes.

Model	Current Range	Output inches(cm*)	Max. Sensor Length inches(cm*)	Conductor Size	Price
2112.14	30A	100mV/A	24 (61)	8 (19)	\$417.00
2112.20	200A	1mV/A	24 (61)	8 (19)	\$417.00
2112.29	300A	10mV/A	24 (61)	8 (19)	\$417.00
2112.24	300A	1mV/A	24 (61)	8 (19)	\$417.00
2112.88	30/300A	100/10mV/A	24 (61)	8 (19)	\$445.00
2112.34	500A	1mV/A	24 (61)	8 (19)	\$417.00
2112.93	50/500A	10/1mV/A	24 (61)	8 (19)	\$445.00
2112.39	1000A	1mV/A	24 (61)	8 (19)	\$417.00
2112.41	1000A	1mV/A	36 (91)	11 (29)	\$487.00
2112.42	1000A	1mV/A	48 (122)	15 (39)	\$557.00
2112.98	100/1000A	10/1mV/A	24 (61)	8 (19)	\$445.00
2113.00	100/1000A	10/1mV/A	36 (91)	11 (29)	\$515.00
2113.01	100/1000A	10/1mV/A	48 (122)	15 (39)	\$584.00
2112.46	3000A	1mV/A	24 (61)	8 (19)	\$445.00
2112.48	3000A	1mV/A	36 (91)	11 (29)	\$515.00
2112.49	3000A	1mV/A	48 (122)	15 (39)	\$584.00
2114.87	300/3000A	3.3/0.3mV/A	24 (61)	8 (19)	\$459.00
2114.88	300/3000A	3.3/0.3mV/A	36 (91)	11 (29)	\$529.00
2113.05	300/3000A	10/1mV/A	24 (61)	8 (19)	\$473.00
2112.00	300/3000A	10/1mV/A	36 (91)	11 (29)	\$543.00
2112.01	300/3000A	10/1mV/A	48 (122)	15 (39)	\$612.00
2112.62	6000A	0.1mV/A	24 (61)	8 (19)	\$654.00
2112.64	6000A	0.1mV/A	36 (91)	11 (29)	\$724.00
2112.65	6000A	0.1mV/A	48 (122)	15 (39)	\$793.00
2112.66	6000A	0.1mV/A	60 (152)	19 (49)	\$933.00
2113.19	600/6000A	1/0.1mV/A	24 (61)	8 (19)	\$654.00
2113.21	600/6000A	1/0.1mV/A	36 (91)	11 (29)	\$724.00
2113.22	600/6000A	1/0.1mV/A	48 (122)	15 (39)	\$793.00
2113.23	600/6000A	1/0.1mV/A	60 (152)	19 (49)	\$933.00
2112.70	10,000A	0.1mV/A	24 (61)	8 (19)	\$724.00
2112.72	10,000A	0.1mV/A	36 (91)	11 (29)	\$793.00
2112.73	10,000A	0.1mV/A	48 (122)	15 (39)	\$863.00
2112.74	10,000A	0.1mV/A	60 (152)	19 (49)	\$1002.00
2113.27	1000/10,000A	1/0.1mV/A	24 (61)	8 (19)	\$682.00
2112.02	1000/10,000A	1/0.1mV/A	36 (91)	11 (29)	\$752.00
2112.03	1000/10,000A	1/0.1mV/A	48 (122)	15 (39)	\$821.00
2113.29	1000/10,000A	1/0.1mV/A	60 (152)	19 (49)	\$961.00
2112.78	30,000A	0.1mV/A	24 (61)	8 (19)	\$933.00
2112.80	30,000A	0.1mV/A	36 (91)	11 (29)	\$989.00
2112.81	30,000A	0.1mV/A	48 (122)	15 (39)	\$1058.00
2112.82	30,000A	0.1mV/A	60 (152)	19 (49)	\$1198.00
2113.33	3000/30,000A	1/0.1mV/A	24 (61)	8 (19)	\$961.00
2113.35	3000/30,000A	1/0.1mV/A	36 (91)	11 (29)	\$1030.00
2113.36	3000/30,000A	1/0.1mV/A	48 (122)	15 (39)	\$1100.00
2113.37	3000/30,000A	1/0.1mV/A	60 (152)	19 (49)	\$1239.00

FLEXIBLE CURRENT PROBES



Features:

- Single or dual range to measure up to 3000A
- True rms measurements when connected to a True rms instrument
- No core saturation or damage if overloaded
- Waterproof sensor
- Shape memory for pre-shaping of sensor before use
- Insensitive to DC, measures only AC component on DC + AC
- Excellent linearity
- 9V alkaline battery provides 2000 hours of continuous use
- EN 61010, 1000V Cat. III (sensor); EN 61010 600V Cat. III (module)

LGLF Series	1000-24-1-1	1000-24-2-1	3000-36-1-1	3000-36-2-1
Model	2120.66	2120.67	2120.68	2120.69
Current Range	5-1000A	5-100A; 50-1000A	5-3000A	5-300A; 50-3000A
Output Signal	1mV/A	10mV/A & 1mV/A	0.333mV/A	3.33mV/A & 0.333mV/A
Residual Current	500mArms	200mArms	500mArms	200mArms
Sensor Length	24" (609mm)	24" (609mm)	36" (914mm)	36" (914mm)
Conductor Size	24": 7.6" (193mm); 36": 11.5" (292mm)			
Cable Length	6.5 ft (2m)			
Output Connect.	14" (0.35m) double insulated cable w/ 4mm banana plug			
Price	\$585.00	\$614.00	\$687.00	\$716.00

FLEXIBLE CURRENT PROBES



Features:

- 24" flexible sensor fits around conductors up to 7.6" in diameter
- Dual measurement ranges of 300A and 3000A
- Read amperage directly on DMM display
- mV output directly proportional to AC current measured
- Output is 10mV/A on 300A range and 1mV/A on 3000A range
- Accuracy of 1% of reading ± 500 mA
- 4% influence of conductor position in jaw
- Dual banana plug termination for direct input DMMs (**2120.81**)
- Electronic module with 4mm safety banana plugs with 3/4" spacing (**2120.82**)
- Up to 300 hours of battery life
- Flashing LED low battery indicator
- EN 61010, 1000V Cat. III, Pollution Degree 2







Specifications:

Current Range:	300A, 3000A
Output Signal:	300A: 10mV/A; 3000A: 1mV/A
Max. Conductor Size:	7.6" (193mm)
Sensor Length:	24" ± 1 " (610mm ± 25.4 mm)
Cable Length:	6.5 ft (2m)
Output Connection:	2120.81: Double insulated 14" (360mm) lead w/ safety banana plugs; 2120.82: 4mm safety banana plugs

Model	Description	Price
2120.81	24-3001 Flexible AC Current Probe	\$336.00
2120.82	24-3002 Flexible AC Current Probe	\$336.00
2118.46	Banana (female) to BNC (male) Adapter	\$56.00

CURRENT MEASUREMENT PROBES

OSCILLOSCOPES & BNC TERMINATED PROBES Models SL261/MN261/MR461/MR561/SR661/JM861

Series	Model	Ratio	Measurement Range		Output Signal		Max. Conductor Size		Output Connection	Price
			AC	DC	Current	Voltage	Ø Cable	Bus Bar		
	1201.51 SL261	–	100mA to 10A pk 1A to 150A pk	100mA to 10A 1A to 100A	–	100mV/AAC/DC 10mV/AAC/DC	0.46" (11.8mm)	N/A	Lead w/BNC	\$557.00
	2115.82 MN261	–	0.1A to 24A 0.1A to 240A	–	–	100mV/A 10mV/A	0.78" (19.8mm)	N/A	Lead w/BNC	\$222.00
	1200.72 MR461	–	0.2A to 40A 0.5A to 400A	0.4A to 60A 0.5A to 600A	–	10mV/AAC/DC 1mV/AAC	One 1.18" (30mm) Two 0.95" (24mm) 2 x 500MCM	Two 1.2 x 0.4" (31.5 x 10mm)	Lead w/BNC	\$389.00
	1200.73 MR561	–	0.2A to 100A 0.5A to 1000A	0.4A to 150A 0.5A to 1500A	–	10mV/AAC 1mV/AAC	One 1.5" (39mm) Two 0.98" (25mm)	One 1.96 x 0.49" (50 x 12.5mm) Two 1.96 x 0.19" (50 x 5mm)	Lead w/BNC	\$459.00
	2113.49 SR661	–	1A to 10A 1A to 100A 1A to 1000A	–	–	100mV/A 10mV/A 1mV/A	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Lead w/BNC	\$417.00
	2110.90 JM861	–	1A to 90A pk 1A to 900A pk 1A to 9000A pk	–	–	10mV/A 1mV/A 0.1mV/A	2.52" (64mm)	1.97 x 5.31" (50 x 135mm) 2.52 x 3.94" (64 x 100mm)	Lead w/BNC	\$551.00

DC/AC MICROPROBES Models K100/K110

Features:

- Measures extremely low level DC from 100µA
- Outputs signal proportional to total current (DC + AC)
- Low noise
- Ultra-compact size and non-contact clamp-on convenience
- Simple plug-in operation
- Designed for use with digital multimeters and oscilloscopes
- Accurate display of wave forms
- No range or mode (AC/DC) switching required
- Extended battery life
- Red LED indicates momentary or continuous overload
- Green LED indicates power and battery condition

Model	K100	K110
Current Range	0 to ±4.5 ADC 0 to 3Arms	0 to ±450 ADC 0 to 300mArms
Output (Vout)	1mV/mA	10mV/mA
Resolution	DC: 50µA typical, AC: 100µA typical	DC: 50µA typical, AC: 100µA typical
Accuracy	DC: 1% rdg ±200µA, AC: 2% rdg ±200µA	DC: 0.5% rdg ±150µA, AC: 0.8% rdg ±200µA
Output Noise	<100µV, DC to 3kHz	<100µV, DC to 3kHz
Frequency Resp.	DC to 2kHz (@ -3dB sine)	DC to 1500kHz (@ -3dB sine)



Model	Description	Price
1200.67	K100 DC/AC Microprobe, 1mV/mA - 4.5A	\$752.00
2111.73	K110 DC/AC Microprobe, 10mV/mA - 450mA	\$807.00

CURRENT MEASUREMENT PROBES






Series	Model	Ratio	Measurement Range		Output Signal		Maximum Conductor Size		Output Connection	Price
			AC	DC	Current	Voltage	Ø Cable	Bus Bar		
	1031.02 MN103	–	1mA to 10A	–	–	1mV _{AC} /mA 1mV _{AC} /A			Lead	\$208.00
	1031.17 MN106	1000:1	2A to 150A	–	1mA _{AC} /A	–			Lead	\$131.00
	2110.71 MN114	–	1mA to 10A	–	100mV _{AC} /A	–	0.47" (12mm)	N/A	Lead	\$180.00
	100.185 MN185	1000:1	50mA to 150A	–	1mA _{AC} /A	–			Jack	\$131.00
	2115.72 MN210	1000:1	0.5A to 240A	–	1mA _{AC} /A	–			Jack	\$111.00
	2115.73 MN211	1000:1	0.5A to 240A	–	1mA _{AC} /A	–			Lead	\$125.00
	2115.74 MN212	1000:1	0.5A to 240A	–	1mA _{AC} /A*	–			Jack	\$125.00
	2115.75 MN213	1000:1	0.5A to 240A	–	1mA _{AC} /A*	–			Lead	\$138.00
	2115.76 MN250	–	0.1A to 240A	–	–	1mV _{AC} /A			Jack	\$125.00
	2115.77 MN251	–	0.1A to 240A	–	–	1mV _{AC} /A	0.78" (19.8mm)	N/A	Lead	\$138.00
	2115.78 MN252	–	0.1A to 240A	–	–	10mV _{AC} /A			Jack	\$152.00
	2115.79 MN253	–	0.1A to 240A	–	–	10mV _{AC} /A			Lead	\$166.00
	2115.80 MN254	–	0.1A to 24A 0.1A to 240A	–	–	100mV _{AC} /A 10mV _{AC} /A			Jack	\$180.00
	2115.81 MN255	–	0.1A to 24A 0.1A to 240A	–	–	100mV _{AC} /A 10mV _{AC} /A			Lead	\$194.00
	2115.83 MN290	–	0.5A to 240A	–	–	100mV _{DC} /A			Jack	\$152.00
	2115.84 MN291	–	0.5A to 240A	–	–	100mV _{DC} /A			Lead	\$166.00
	2116.22 MN306	–	10mA to 12A	–	–	100mV/A			Jack	\$180.00
	2116.23 MN307	–	10mA to 12A	–	–	100mV/A			Lead	\$194.00
	2116.24 MN312	1000:1	0.1A to 240A	–	1mA _{AC} /A*	–			Jack	\$166.00
	2116.25 MN313	1000:1	0.1A to 240A	–	1mA _{AC} /A*	–	0.78" (19.8mm)	N/A	Lead	\$180.00
	2116.26 MN352	–	0.1A to 240A	–	–	10mV/A			Jack	\$180.00
	2116.27 MN353	–	0.1A to 240A	–	–	10mV/A			Lead	\$194.00
2116.28 MN373	–	00.1A to 2.4A 0.1A to 240A	–	–	1000mV/A 10mV/A			Lead	\$180.00	
	1201.40 SL201	–	5mA to 1.5A 500mA to 120A	50 mA to 2A 500mA to 150A	–	1mV/mA _{AC} /bc 1mV/A _{AC} /bc	0.46" (11.8mm)	N/A	Lead	\$459.00
	1201.45 SL206	–	10mA to 1.5A 50mA to 60A	10mA to 2A 50mA to 80A	–	1 mV/mA _{AC} /bc 10mV/A _{AC} /bc			Lead	\$473.00
	1201.07 MD301	–	2A to 500A	–	–	1mV _{DC} /A _{AC}			Lead	\$180.00
	1201.21 MD303	1000:1	4A to 500A	–	1mA _{AC} /A	–			Lead	\$152.00
	1201.37 MD304	100:1	1A to 600A	–	10mA _{AC} /A	–	1.18" (30mm)	2.48 x 0.20" (63 x 5mm)	Lead	\$250.00
	1201.36 MD305	1000:1	1A to 600A	–	1mA _{AC} /A	–	2 x 500MCM		Lead	\$250.00
	2110.75 MD314	–	4A to 500A	–	–	1mV _{AC} /A			Lead	\$180.00

*Diode protection for open secondary (output)

CURRENT MEASUREMENT PROBES



Series	Model	Ratio	Measurement Range		Output Signal		Maximum Conductor Size		Output Connection	Price
			AC	DC	Current	Voltage	Ø Cable	Bus Bar		
	1200.70 MR410	–	1A to 400A	1A to 600A	–	1mV/Aac/dc	1.18" (30mm) Two 0.95" (24mm) 2 x 500MCM	Two 1.2 x 0.4" (31.5 x 10mm)	Lead	\$201.00
	1200.68 MR411	–	0.2A to 40A 0.5A to 400A	0.4A to 60A 0.5A to 600A	–	10mV/Aac/dc 1mV/Aac/dc			Lead	\$278.00
	1200.71 MR520	–	1A to 1000A	1A to 1500A	–	1mV/Aac/dc	One 1.5" (39mm) Two 0.98" (25mm)	One 1.96 x 0.49 (50 x 12.5mm) Two 1.96 x 0.19" (50 x 5mm)	Lead	\$278.00
	1200.69 MR521	–	0.2A to 100A 0.5A to 1000A	0.4A to 150A 0.5A to 1500A	–	10mV/Aac/dc 1mV/Aac/dc			Lead	\$348.00
	2113.42 SR600	1000:1	0.1A to 1000A	–	1mAac/A	–	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Jack	\$222.00
	2113.43 SR601	1000:1	0.1A to 1000A	–	1mAac/A*	–			Jack	\$250.00
	2113.44 SR604	1000:1	0.1A to 1000A	–	1mAac/A*	–			Lead	\$264.00
	2113.47 SR631	1000:5	0.1A to 1000A	–	5mAac/A*	–			Jack	\$306.00
	2114.79 SR632	1000:5	0.1A to 1000A	–	5mAac/A*	–	Lead	\$320.00		
	2113.48 SR634	250:5 500:5 1000:5	1A to 250A 1A to 500A 1A to 1000A	5mAac/A* – 20mAac/A	10mAac/A	–	Jack	\$334.00		
	2113.45 SR651	–	0.1A to 1000A	–	–	1mVac/A	Jack	\$250.00		
	2113.46 SR652	–	0.1A to 1000A	–	–	1mVac/A	Lead	\$264.00		
	2116.29 SR701	1000:1	1mA to 1000A	–	1mAac/A*	–	Jack	\$292.00		
	2116.30 SR704	1000:1	1mA to 1000A	–	1mAac/A*	–	Lead	\$306.00		
	2116.31 SR751	–	0.1A to 1000A	–	–	1mVac/A	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Jack	\$292.00
	2116.32 SR752	–	0.1A to 1000A	–	–	1mVac/A			Lead	\$306.00
	2116.33 SR759	–	1mA to 1A 10mA to 10A 0.1A to 100A 1A to 1000A	–	–	1mVac/mA 1mVac/10 mA 1mVac/100 mA 1mVac/A	Lead	\$479.00		
		2110.79 JM800A	1000:1	1A to 1000A	–	1mAac/A	–	2.52" (64mm)	1.97 x 5.31" (50 x 135mm) 2.52 x 3.94" (64 x 100mm)	Lead
2110.80 JM810A		2000:2	1A to 2000A	–	1mAac/A	–	Lead			\$488.00
2110.93 JM813A		3000:3	1A to 3000A	–	1mAac/A	–	Jack			\$551.00
2110.81 JM815A		1000:5	1A to 1000A	–	5mAac/A	–	Lead			\$488.00
2110.83 JM830A		3000:1	1A to 3000A	–	.33mAac/A	–	Lead			\$551.00
2110.84 JM835A		3000:5	1A to 3000A	–	1.6mAac/A	–	Lead			\$551.00
2110.85 JM840A		500:1 1000:1 1500:1	1A to 500A 1A to 1000A 1A to 1500A	2mAac/A – .66mAac/A	mAac/A	–	Jack			\$551.00
2110.87 JM850A		1000:1 2000:1 3000:1	1A to 1000A 1A to 2000A 1A to 3000A	1mAac/A – .33mAac/A	.5mAac/A	–	Jack			\$551.00
2110.88 JM865A		1000:5 2000:5 3000:5	1A to 1000A 1A to 2000A 1A to 3000A	5mAac/A – 1.67mAac/A	2.5mAac/A	–	Jack			\$551.00
2110.89 JM875		–	100mA to 30A 1A to 300A 1A to 2800A	–	100mVac/A – 1mVac/A	10 mVac/A	Jack			\$551.00

* Diode Protection for open secondary (Output)

AC CLAMP-ON CURRENT ADAPTER



Specifications:

Model	i200	i200s
AC Current Range:	0-200A	0-20/200A
Nominal Current Range:	from 0.5-240A	from 0.1-24A, from 0.5-240A
Maximum Current:	240A	240A
Accuracy (48-65Hz):	≤3% +0,5A	≤3% +0,5A
Frequency:	40Hz-10kHz	40Hz-10kHz
Working Voltage:	500V	600V
Max. Dia. of Conductor:	20mm	20mm
Max. Dim. of Conductor:	20 x 5mm	20 x 5mm
Output Levels:	1mA/A	10mV/A, 100mV/A
Output Cable:	Double sheathed banana plug	2m with BNC connection
Overvoltage Protection:	Cat III 600V	Cat III 600V

Model	Description	Price
i200	AC Clamp-on Current Adapter	\$158.00
i200s	AC Clamp-on Current Adapter	\$237.00

AC CLAMP-ON CURRENT ADAPTER



Features:

- AC current measuring accessory
- For use with DMMs with mV function
- Measures up to 400A AC
- Carrying case included

Specifications:

Range:	0.1 to 400 A AC
Output Signal:	1mV/A
Jaw Opening:	1.18" (30mm)
Overvoltage Protection:	IEC 61010-1 Cat.III 300V; Cat.II 600V

Model	Description	Price
CMA-40	AC Clamp-on Current Adapter	\$100.00

AC/DC CLAMP-ON CURRENT ADAPTER



Features:

- AC/DC current measuring accessory
- Measures up to 600A AC/DC
- For use with DMMs with AC/DC mV function
- Includes 9V battery and carrying case

Specifications:

Range:	0.1 to 600A AC/DC
Output Signal:	100A: 10mV/A; 600A: 1mV/A
Jaw Opening:	1.38" (35mm)
Overvoltage Protection:	IEC 61010-1 Cat.II 600V

Model No.	Description	Price
CMA-60	AC/DC Clamp-on Current Adapter	\$141.00

CLAMP-ON METERS



Model ST-330:

- Mini AC autoranging clamp meter
- LCD display with backlight
- Data Hold, Max Hold
- Auto shut off and low battery indication
- Resistance to 20MΩ
- Diode test to 0.3mA

Model ST-332:

- Mini AC/DC autoranging clamp meter
- LCD display with backlight
- Data Hold and zero function
- Auto shut off and low battery indication
- Resistance to 20MΩ
- Diode test to 0.3mA

Model ST-333:

- Autoranging A AC/DC
- Temperature range to 1832°F/1000°C
- LCD display with backlight
- Data Hold and zero function
- Auto shut off and low battery indication
- Resistance to 20MΩ
- Diode test to 0.3mA

Model ST-335:

- High resolution, 0.1μA
- Temperature range to 1832°F/1000°C
- LCD display with backlight
- Data Hold and zero function
- Auto shut off and low battery indication
- Resistance to 20MΩ
- Diode test to 0.3mA

Model ST-336:

- High resolution, 0.1μA
- Frequency range to 10MHz
- LCD display with backlight
- Data Hold and zero function
- Auto shut off and low battery indication
- Resistance to 20MΩ
- Diode test to 0.3mA

Specifications:

Model	ST-330	ST-332	ST-333	ST-335	ST-336
AC Current Range	400A	400A	400A	400A	400A
DC Current Range	-	400A	400A	-	-
AC Voltage Range	600V	600V	600V	600V	600V
DC Voltage Range	-	600V	600V	600V	600V
Resistance	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ
Capacitance	-	100μF	100μF	100μF	100μF
Frequency	-	-	150kHz	150kHz	10MHz
Max. Circuit Voltage	600V	600V	600V	600V	600V
Display	2000-count LCD	4000-count LCD	4000-count LCD	4000-count LCD	4000-count LCD
Dimensions/Weight	8.1 x 2.75 x 1.5" (205 x 70 x 37mm) / 7.05 oz (200 g)				
Accessories	Test leads, carrying case, 2 "AAA" batteries				
Price	\$95.00	\$149.00	\$159.00	\$110.00	\$105.00

Accessories:



Model	Description	Price
AC-006	AC Line Splitter	\$20.00
DH802C	Type K Temperature Adapter	\$105.00
518-6	Test Leads w/ alligator clips	\$22.00

CLAMP-ON METERS

Features:

- Full function autoranging digital multimeter includes AC/DC voltage, and current, resistance, capacitance, frequency, duty cycle, diode and continuity
- True RMS measurements
- Current measurements to 2000A through the clamp and 240mA via the test leads
- Large 5000-count backlit display for high resolution
- Basic VDC accuracy of 1% with 0.1mV resolution and current resolution to 0.1µA
- 2.36" (60mm) clamp jaw opening (750MCM)
- DC current push button zero, relative measurements and data hold
- Hold function for "freeze" readings
- Heavy duty ABS case with built-in stand and thumb control function switch
- Complete with test leads
- Carrying case and 9V battery extra



Specifications:

Function	Range	Resolution	Accuracy (% rdg. + dgt.)
AC/DC Current:	240, 2000A	0.1A	±(2% + 5)
AC/DC Current:	240, 2400µA, 24, 240mA	0.1µA	±(1.2% + 5)
DC Voltage:	240mV, 2.4, 24, 240, 1000V	0.1mV	±(1% + 2)
AC Voltage:	2.4, 24, 240, 1000V	1mV	±(1.2% + 5)
Capacitance:	25, 250nF, 2.5, 25µF	0.01µF	±(3% + 5)
Resistance:	240Ω, 2.4, 24, 240kΩ, 2.4, 24MΩ	0.1Ω	±(1% + 5)
Frequency:	50, 500Hz, 5, 50, 100kHz	0.001Hz	±(1% + 5)
Duty Cycle:	0.1% to 99.9%	0.1%	±(1% + 5)

Model	Description	Price
CM-9930	Clamp-on Multimeter, 2000A AC/DC	\$299.00
AC-006	AC Line Splitter	\$20.00
DH802C	Type K temperature Adapter	\$105.00
518-6	Spare Set of Test Leads	\$22.00
CA-05A	Carrying Case	\$21.00

CLAMP-ON METERS

Features:

- Autoranging, pocket-size clamp-on in a rugged housing
- Measures AC/DC current and voltage, frequency and resistance
- Auto or manual ranging with data hold and relative mode
- Continuity beeper and diode test
- Overload protection on all ranges
- Large 2999 count display (4999 counts for Hz)
- 1.2" (30mm) clamp jaw opening (500 MCM)
- Compact, rugged clamp-on with splash resistant front panel design
- Complete with test leads
- Carrying case and two 1.5V AA batteries extra



Specifications:

Function	Range	Resolution	Accuracy (% rdg. + digits)
AC Current:	600A	0.1A	±(2% + 5)
DC Current:	600A	0.1A	±(2% + 8)
AC Voltage:	600V	0.001V	±(1.2% + 5)
DC Voltage:	600V	0.1mV	±(1% + 2)
Resistance:	24MΩ	0.1Ω	±(1% + 5)
Frequency:	100kHz	0.01Hz	±(1% + 5)

Model	Description	Price
CM-9940	Clamp-on Multimeter, 600A AC/DC	\$179.00
AC-006	Line Splitter	\$20.00
DH802C	Type K Temperature Adapter	\$105.00
518-6	Spare Set of Test Leads	\$22.00
CA-52A	Carrying Case	\$15.00

AC/DC CLAMP METER

Features:

- Measures DC and AC current and volts, resistance, plus diode check
- Built-in temperature function with standard Type K thermocouple socket
- PEAK HOLD function for measuring transient signals
- DATA HOLD freezes reading on any function
- Large 3-1/2 digit LCD readout indicates Overload and Low Battery
- Automatic zero adjustment
- Clamp jaws open to 2-1/2" (62 mm)
- Hall effect sensor provides DCA accuracy to 2% f.s.
- Measurement possible even under strong magnetic fields
- Unit supplied with standard test leads, naked bead temperature probe, carrying case and instructions



Specifications:

Function	Range	Resolution	Accuracy	Protection
AC Current	200A 400A	0.1A 1A	±2% ±2%	1000ACA (within 1 min)
DC Current	200A 400A	0.1A 1A	±2% ±2%	1000ACA (within 1 min)
AC Volts	750V	0.1V	±1%	DC:±1100V
Resistance	2,000Ω	1Ω	±1.2%	AC: 1000Vrms 250V DC/AC Vrms

Input Impedance: DC: 10 MΩ; AC: 4 MΩ
 Open Circuit Voltage: 2.8V
 Sampling Time: 0.4 second
 Operating Conditions: 0 to 50°C, 80% max. R.H.
 Diode Check: Approx. forward V; short/nonconductance; good/defect

Power Supply: One 9V battery
 Dimensions: 8-7/8 x 3 x 1-7/8" (255 x 74 x 46 mm)
 Weight: 14 oz. (400g)

Additional Specifications:

Model K5010F

Range: -40 to 1400°F
 Resolution: 1°F
 Accuracy: -40 to -20°F: ±4°F; -20 to 0°F: ±3°F;
 0 to 1400F: ±(1.2% ±2°F)

Model K5010C

Range: -40 to 750°C
 Resolution: 1°C
 Accuracy: -40 to -20°C: ±3°C; -20 to 0°C: ±2°C;
 0 to 750°C: ±(1% ±2°C)

Model	Description	Price
K5010F	1000A AC/DC Clamp-on Ammeter, °F	\$288.00
K5010C	1000A AC/DC Clamp-on Ammeter, °C	\$288.00

AC/DC CLAMP METER

Features:

- True RMS AC/DC clamp meter with temperature function
- AC/DC current to 600A
- Basic 2.5% DC current accuracy
- Resolution 0.1A
- Data Hold
- Peak Hold
- DC current zero adjust
- Auto power off
- Temperature Range: -4 to 1400°F / -20 to 760°C
- Complete with test leads, battery and carrying case



Specifications:

AC Current Range: 400 A, 600 A
 DC Current Range: 400 A, 600 A
 AC Voltage Range: 400 mV to 600 V
 DC Voltage Range: 4 to 600 V
 Resistance: 40 MΩ
 Frequency: 9.999 MHz (max.)
 Display: 4000-count LCD
 Max. Jaw Opening: 1.25" (33mm)
 Dimensions: 8 x 3.1 x 1.6"
 Weight: 6.5 oz

Model	Description	Price
ST-9800T	2000A AC/DC Clamp-on & DMM	\$159.00
AC-006	AC Line Splitter	\$20.00
DH802C	Type K Thermocouple Adapter	\$105.00
518-6	Test Leads w/ alligator clips	\$22.00

AC/DC CLAMP METERS

Features:

- Automatically detect AC or DC in voltage and current
- True RMS measurements on most distorted waveforms
- 4kHz bandwidth
- Crest factor of 3.5 at 600Arms and 900Vrms
- Peak function enables the capture of 500 μ s crest values
- Min/Max automatic capture of peak values at 100ms
- Selectable V-live function to warn of the use of live circuits or elevated voltages
- Temperature up to 1832°F (1000°C) via K-thermocouple
- Continuity at programmable threshold from 1 to 40 Ω (buzzer warning of voltage > 45V peak)
- Backlit, 4-digit, 9,999-count digital display
- Ergonomic design for one-handed operation
- Operates on a single 9V alkaline battery
- Battery life displayed directly in hours
- Auto-off to conserve battery life
- 1.00" (26mm) maximum jaw opening
- EN61010-1, EN-61010-2-032 600V Cat. III safety ratings
- **Model F01** does not have a magnetic core in its jaw
- **Model F05** measures phase rotation (using only two leads), Power Factor and Power
- **Models F05** and **F07** measure in-rush currents from 1 cycle up to 10 cycles and frequency
- **Model F07** measures Trms voltage and current and can incorporate the DC component of the signal for the truest RMS



Model	F01 (2129.51)	F03 (2129.52)	F05 (2129.53)	F07 (2129.54)
AC/DC VOLTAGE				
Ranges	0.2 to 39.99V 40.0 to 399.9V 400 to 600V	0.2 to 39.99V 40.0 to 399.9V 400 to 600V (400 to 900V pk)	0.2 to 39.99V 40.0 to 399.9V 400 to 600V (400 to 900V pk)	0.2 to 39.99V 40.0 to 399.9V 400 to 600V (400 to 900V pk)
Accuracy: 40V 400, 4000V	1% rdg. + 5 cts. 1% rdg. + 2 cts.	1% rdg. + 5 cts. 1% rdg. + 2 cts.	1% rdg. + 5 cts. 1% rdg. + 2 cts.	1% rdg. + 5 cts. 1% rdg. + 2 cts.
CURRENT				
Ranges	0.20 to 39.99A 40.00 to 399.9A 400 to 600A pk	0.20 to 39.99A 40.00 to 399.9A 400 to 600A pk	0.20 to 39.99A 40.00 to 399.9A 400 to 600A pk	0.20 to 39.99A 40.00 to 399.9A 400 to 600A pk
Accuracy: 40A 400, 4000A	1.5% rdg. + 10 cts. 1.5% rdg. + 2 cts.	1.5% rdg. + 10 cts. 1.5% rdg. + 2 cts.	1.5% rdg. + 10 cts. 1.5% rdg. + 2 cts.	1.5% rdg. + 10 cts. 1.5% rdg. + 2 cts.
RESISTANCE				
Ranges	0.0 to 399.9 Ω - -	0.0 to 399.9 Ω 400 to 3999 Ω -	0.0 to 399.9 Ω 400 to 3999 Ω 4.00 to 39.99k Ω	0.0 to 399.9 Ω 400 to 3999 Ω 4.00 to 39.99k Ω
Accuracy	-	1% rdg. + 2 cts.	1% rdg. + 2 cts.	1% rdg. + 2 cts.
CONTINUITY				
Range	0.0 to 399.9 Ω	0.0 to 399.9 Ω	0.0 to 399.9 Ω	0.0 to 399.9 Ω
Accuracy	1% rdg. + 2 cts.	1% rdg. + 2 cts.	1% rdg. + 2 cts.	1% rdg. + 2 cts.
DIODE				
Range	-	0 to 3.199V	0 to 3.199V	0 to 3.199V
INRUSH CURRENT				
Ranges	-	-	\geq 5A pk for the 1st period of the signal	
Accuracy	-	-	5% + 0.5A	
Capture Time	-	-	0.5 to 10 periods (8 to 160ms at 60Hz)	
FREQUENCY				
Ranges	-	-	40Hz, 400Hz, 4000Hz, 20kHz	
Accuracy	-	-	0.4% rdg. + 1 ct.	
POWER				
Ranges	-	-	4000W, 40kW, 240kW	-
POWER FACTOR CALCULATION				
Range	-	-	0.20 to 0.49, 0.50 to 1.00	-
Accuracy	-	-	5% rdg + 2 cts, 2% rdg + 2 cts	-
Price	\$277.00	\$349.00	\$427.00	\$343.00

CLAMP-ON METERS



Features:

- Compact size, fits into your pocket
- 400A AC or 400A AC/DC current measurements
- 600V AC/DC measurements
- Resistance measurements to 4000Ω
- True RMS measurements (**Model 502 only**)
- Frequency measurements from V and A (**Models 501 & 502 only**)
- Continuity with beeper below 40Ω
- Hold function for "freeze" readings
- Push-button for easy ADC zeroing
- Large, easy-to-read 4000-count display
- 42-segment analog bargraph
- Supplied with test leads and soft carrying case



Specifications:

Model	501 (2117.21)	502 (2117.66)	503 (2117.22)
AC CURRENT			
Range	0.05 to 400A	0.05 to 400Arms	0.05 to 400Arms
Resolution	0.01, 0.1A	0.01, 0.1A	0.01, 0.1A
Accuracy 50/60Hz	±1.9% rdg. ±5 cts.	±1.9% rdg. ±5 cts.	±1.5% rdg. ±10 cts.
60/500Hz	±2.5% rdg. ±5 cts.	±2.5% rdg. ±5 cts.	±2.5% rdg. ±10 cts.
AC VOLTAGE			
Range	0.5 to 600V	0.5 to 600Vrms	0.5 to 600V
Resolution	0.1 & 1V	0.1 & 1V	0.1 & 1V
Accuracy 50/60Hz	0.8% rdg. ±5 cts.	1.5% rdg. ±5 cts.	0.8% rdg. ±5 cts.
60/500Hz	1.5% rdg. ±5 cts.	1.5% rdg. ±5 cts.	1.5% rdg. ±5 cts.
Input Impedance	1MΩ	1MΩ	1MΩ
DC CURRENT			
Range	-	-	0.1 to 400A
Resolution	-	-	0.01, 0.1A
Accuracy	-	-	2.5% rdg. ±10 cts.
DC VOLTAGE			
Range	0.2 to 600V	0.2 to 600V	0.2 to 600V
Resolution	0.1 & 1V	0.1 & 1V	0.1 & 1V
Accuracy	1% rdg. ±2 cts.	1% rdg. ±2 cts.	1% rdg. ±2 cts.
Input Impedance	1MΩ	1MΩ	1MΩ
RESISTANCE			
Range	0.2 to 400Ω	0.2 to 400Ω	0.2 to 400Ω
Accuracy	1% rdg. ±2 cts.	1% rdg. ±2 cts.	1% rdg. ±2 cts.
Max. Test Voltage	1.5VDC	1.5VDC	1.5VDC
CONTINUITY			
Max. Test Voltage	Beeper <40Ω	Beeper <40Ω	Beeper <40Ω
	1.5VDC	1.5VDC	1.5VDC
FREQUENCY			
Current Input	4 to 10kHz	4 to 10kHz	-
Resolution	1 to 10Hz	1 to 10Hz	-
Accuracy	±0.1% rdg. +1 ct.	±0.1% rdg. +1 ct.	-
Min. Signal Input	2Arms	2Arms	-
Voltage Input	4 to 400kHz	4 to 400kHz	-
Resolution	1 to 100Hz	1 to 100Hz	-
Accuracy	±0.1% rdg. +1 ct.	±0.1% rdg. +1 ct.	-
Min. Signal Input	5Vrms	5Vrms	-
Price	\$138.00	\$166.00	\$239.00

CLAMP-ON METERS

Features:

- Standard size, full function clamp-on meters
- Fully autoranging (**Models 512 & 514 only**)
- 1000A AC or 1000A AC/DC current measurements (**Model 514 only**)
- 600V AC/DC measurements
- Resistance measurements to 4000Ω
- True RMS measurements (**Models 512 & 514 only**)
- Frequency measurements from V and A
- Continuity with beeper below 40Ω
- Diode test
- 1ms Peak function for fast capture of signals
- Hold function for "freeze" readings
- Push-button for easy ADC zeroing
- Large, easy-to-read 4000-count display
- 42-segment analog bargraph
- Supplied with test leads and soft carrying case



Specifications:

Model	511 (2117.67)	512 (2117.68)	514 (2117.70)
AC CURRENT			
Range	0.05 to 1000A	0.05 to 1000Arms	0.05 to 1000Arms
Resolution	0.01, 0.1 & 1A	0.01, 0.1 & 1A	0.01, 0.1 & 1A
Accuracy	±1.9% rdg. ±5 cts.	±1.9% rdg. ±5 cts.	±1.9% rdg. ±5 cts. ±2.5% rdg. ±5 cts.
AC VOLTAGE			
Range	0.5 to 750V	0.5 to 750Vrms	0.5 to 750Vrms
Resolution	0.1 & 1V	0.1 & 1V	0.1 & 1V
Accuracy	1.2% rdg. ±5 cts.	1.2% rdg. ±5 cts.	1.2% rdg. ±5 cts.
Input Impedance	1MΩ	1MΩ	1MΩ
DC CURRENT			
Range	-	-	1 to 1000A
Resolution	-	-	0.01, 0.1 & 1A
Accuracy	-	-	2.5% rdg. ±5 cts.
DC VOLTAGE			
Range	0.2 to 1000V	0.2 to 1000V	0.2 to 1000V
Resolution	0.1 & 1V	0.1 & 1V	0.1 & 1V
Accuracy	0.75% rdg. ±2 cts.	0.75% rdg. ±2 cts.	0.75% rdg. ±2 cts.
Input Impedance	10MΩ	10MΩ	10MΩ
RESISTANCE			
Range	0.2 to 4000Ω	0.2 to 4000Ω	0.2 to 4000Ω
Accuracy	1% rdg. ±2 cts.	1% rdg. ±2 cts.	1% rdg. ±2 cts.
Max. Test Voltage	15VDC	15VDC	15VDC
DIODE			
Open Circuit Volt.	0.6mA	0.6mA	0.6mA
	3VDC	3VDC	3VDC
CONTINUITY			
Max. Test Voltage	Beeper <40Ω	Beeper <40Ω	Beeper <40Ω
	1.5VDC	1.5VDC	1.5VDC
FREQUENCY			
Current Input	4 to 10kHz	4 to 10kHz	4 to 10kHz
Resolution	1Hz	1Hz	1Hz
Accuracy	±0.1% rdg. +1 ct.	±0.1% rdg. +1 ct.	±0.1% rdg. +1 ct.
Min. Signal Input	2Arms	2Arms	2Arms & 5Arms
Voltage Input	4 to 10kHz	4 to 10kHz	4 to 10kHz
Resolution	1 to 10Hz	1 to 10Hz	1 to 10Hz
Accuracy	±0.1% rdg. +1 ct.	±0.1% rdg. +1 ct.	±0.1% rdg. +1 ct.
Min. Signal Input	5Vrms	5Vrms	5Vrms & 10Vrms
Price	\$207.00	\$255.00	\$319.00

CLAMP-ON METERS



Model 337



Model 336



Model 335



Model 334



Model 333

Features:

- Auto power-off prolongs battery life
- Ergonomic shape fits comfortably in your hand and into tight spaces
- Display backlight available on most models
- Accurate low current measurements
- Better than 2% basic accuracy
- Display hold function
- Continuity test function
- **NEW** inrush feature measures motor-starting current the way a circuit breaker or overload unit sees it (selected models)
- Compact size of **Models 321** and **322** means they fit easily into a tool belt or pocket
- Each unit includes test leads, 2 AAA carbon zinc batteries, soft carrying case and instruction card



Model 321



Model 322

Model	321	322/B	333	334	335	336	337
AC Current	400.0A	40.00, 400.0A	400.0A	600.0A	600.0A	600.0A	999.9A
DC Current	-	-	-	-	-	600.0A	999.9A
AC Voltage	400.0, 600V	400.0, 600V	600.0V	600.0V	600.0V	600.0V	600.0V
DC Voltage	-	400.0, 600V	600.0V	600.0V	600.0V	600.0V	600.0V
Resistance	400.0Ω	400.0Ω	600.0Ω	6000Ω	6000Ω	6000Ω	6000Ω
Continuity	≤ 30Ω	≤ 30Ω	≤ 30Ω	≤ 30Ω	≤ 30Ω	≤ 30Ω	≤ 30Ω
Auto-off	•	•	•	•	•	•	•
Display Hold	•	•	•	•	•	•	•
Full Size			•	•	•	•	•
Backlight				•	•	•	•
Peak Hold				100mS	100mS	100mS	100mS
True RMS					•	•	•
Frequency							400 Hz
Min/Max							•
Basic Accuracy							
AC/DC Current	2% + 5						
AC/DC Voltage	1% + 5						
Resistance	1,5% + 5						
Frequency	0,5% + 5						
Price	\$143.00	\$153.00	\$201.00	\$231.00	\$301.00	\$425.00	\$471.00

CLAMP-ON METERS



Model AD40A:

- Low cost miniature digital ammeter
- 400A AC range
- 4000-count display with bargraph
- Autoranging
- Data hold
- Auto-off

Model AD105:

- Broad range 1000A AC & DC ammeter
- True RMS reading
- 4000-count
- Peak hold & AC auto zero
- Autoranging
- Belt-clip sleeve case included

Model AC40A:

- Mini-clamp DMM
- 400A range
- 600V AC & DC range
- 4000-count display with bargraph
- Autoranging
- Data hold
- Auto-off
- Continuity test

Model AC60:

- Professional's 600A AC DMM
- 4000-count display
- Autoranging
- Data hold
- Continuity test

Model AC65:

- True RMS reading
- Professional's 600A AC DMM
- 4000-count display
- Autoranging
- Data hold
- Continuity test

Model AC68:

- Top of the line professional DMM
- 8 functions/11 ranges
- 4000-count
- AC & DC
- DC auto zero
- Data & AC peak hold
- Diode test & continuity beeper

Model	AD40A	AD105	AC40A	AC60	AC65	AC68
Display Resolution	2,000	4,000	4,000	4,000	4,000	4,000
True RMS Measuring	-	Yes	-	-	Yes	-
AC Current	400A	1000A	400A	600A	600A	600A
DC Current	-	1000A	-	-	-	600A
AC Voltage	-	-	600V	600V	600V	600V
DC Voltage	-	-	600V	-	-	600V
Basic Accuracy	2.0%	1.9%	2.0%	1.9%	1.9%	0.75%
Resistance	-	-	400Ω	40kΩ	40kΩ	4kΩ
Diode Test	-	-	-	-	-	Yes
Continuity Test	-	-	Yes	Yes	Yes	Yes
Data Hold	Yes	-	Yes	Yes	Yes	Yes
Auto-off	Yes	Yes	-	Yes	Yes	Yes
DC Auto Zero	-	Yes	-	-	-	Yes
AC Peak Hold	-	Yes	-	-	-	Yes
Max. Conductor Size	25.4mm (1")	51mm (2")	25.4mm (1")	40mm (1.57")	40mm (1.57")	40mm (1.57")
ENC1010-1 Rating	600V	1000V	600V	300V	300V	600V
Price	\$93.00	\$356.00	\$124.00	\$155.00	\$217.00	\$310.00

AC/DC CLAMP METER

Features:

- Multi-purpose AC/DC digital clamp meter
- Fully autoranging
- Up to 1000A AC/DC
- Rotary switch for easier operation
- 4 digit LCD
- MAX/MIN and differential measurements
- Display Hold



Specifications:

AC/DC CURRENT

Range: 1000A
Accuracy: $\pm 1.5\%$ rdg. ± 3 dgt. (0~600A);
 $\pm 3.0\%$ rdg. ± 3 dgt. (601~1000A)

AC/DC VOLTS

Range: 600V
Accuracy: $\pm 1.0\%$ rdg. ± 3 dgt.

RESISTANCE

Range: 10,000 Ω
Accuracy: $\pm 1.0\%$ rdg. ± 3 dgt.

GENERAL

Display: 4 digit LCD, Max. 9999
Rectification: Average
Sampling Rate: 2.5 times/sec.
Conductor Diam.: Max. 36mm \varnothing
Power Supply: One 9V alkaline battery
Dimensions: 182 x 56 x 31 mm
Weight: 270 g

Model	Description	Price
SK-7712	AC/DC Digital Clamp Meter	\$472.00

AC/DC CLAMP METER

Features:

- Measures AC and DC current up to 2000A, plus AC and DC voltage up to 1000V
- Autoranging
- Max/Min and differential measurements
- Data Hold function to freeze readings
- Audible continuity test
- Frequency and temperature by optional temperature probes
- Output terminal supplies current signals directly to oscilloscopes and recorders using optional adapter



Specifications:

AC/DC CURRENT

Range: 999.9 / 2000A
Accuracy: $\pm 1.5\%$ rdg. ± 3 dgt.

AC/DC VOLTS

Range: 999.9V
Accuracy: $\pm 1.0\%$ rdg. ± 3 dgt.

RESISTANCE

Range: 1000 Ω / 10k Ω / 20k Ω
Accuracy: $\pm 1.0\%$ rdg. ± 3 dgt.

FREQUENCY

Range: 2000Hz
Accuracy: $\pm 0.5\%$ rdg. ± 1 dgt.

TEMPERATURE

Range: -50 ~ 160 $^{\circ}$ C (-58 ~ 320 $^{\circ}$ F)
Accuracy: $\pm 1.0\%$ rdg. ± 3 dgt.

GENERAL

Display: 4 digit LCD, Max. 9999
Rectification: Average
Sampling Rate: 2.5 times/sec.
Conductor Diam.: Max. 55mm \varnothing
Power Supply: 4 x 1.5V or "AA" batteries, AC adapter (optional)
Dimensions: 250 x 66 x 40.5 mm
Weight: 500 g

Model	Description	Price
SK-7705	AC/DC Digital Clamp Meter	\$660.00

CLAMP-ON METERS

Features:

- High energy fuse protection on the ohmmeter range against misapplication to 600V
- High case breakdown voltage: 3500 VAC
- Extendo Leads act as an extra pair of hands, making voltage measurements faster and easier
- Clamp-on Transformer Jaws: Take current readings without interrupting service. Clamp around conductors up to 1" (2.54 cm) in diameter or 500 MCM; 2" (5.08 cm) or 2000 MCM for 1000A models.
- Pointer Lock. Take readings in hard-to-reach or darkened areas, lock the pointer and read where it's convenient.
- Recessed, break-resistant window magnifies scale, makes reading easier. Reduces possibility of static electricity build-up.
- Leads lock in. Cannot unexpectedly pull out and leave high voltage exposed.
- **Model RS3A** includes deluxe carrying case, extendo leads and alligator clip adapter

Specifications:

Voltage Ranges:	0-150/300/600 VAC
Current Ranges:	0-6/15/40/100/300 AAC
Resistance Accuracy:	25Ω midscale, ±3% arc
Operating Frequency:	60 Hz
Case:	RS-3: G; RS-3A: AR
Jaw Size:	1" (2.54 cm)
Weight:	10 oz (283 g)



Model	Description	Price
RS-3	Clamp-on Meter	\$168.00
RS-3SUPER	Deluxe Clamp-on Meter	\$187.00

CLAMP-ON METERS

Features:

- True RMS measurement (**ACD-10TRMS Pro only**)
- Autoranging
- AC current to 400A
- AC and DC voltage to 600V
- Resistance to 40MΩ with continuity beeper
- Capacitance to 3000μF
- Frequency measurement
- Diode test
- Data hold and maximum reading functions
- Temperature measurement (**ACD-14 only**)
- Dual display (**ACD-14 only**)
- Accommodates conductors up to 1.02" (26mm) in diameter
- Large 1/2", 3-3/4 digit, 4000 count LCD
- Overload protected
- Rubber over-molded case
- Auto power-off after approx. 20 minutes of non-use
- Designed to meet CE, UL, Cat. II 600V and Cat. III 300V (**ACD-10TRMS Pro & ACD-10 Pro**); Cat. III 600V (**ACD-14**)



Specifications:

AC/DC VOLTAGE

AC Range:	4.000, 40.00, 400.0, 600V
Accuracy:	±1.5% rdg. + 5 LSD
DC Range:	0-400.0mV, 4.000, 40.00, 400.0, 600V
Accuracy:	±0.5% rdg. + 3 LSD

AC CURRENT

Range:	0-40.00A, 400.0A
Accuracy:	±1.9% rdg. + 8 LSD

RESISTANCE

Range:	0-400.0Ω, 4.000kΩ, 40.00kΩ, 400.0kΩ, 0-4.000MΩ, 40.00MΩ
Accuracy:	±0.6% rdg. + 4 LSD

CAPACITANCE

Range:	500.0nF, 5.00μF, 50.00, 500.0, 3000μF
Accuracy:	±3.5% rdg. + 6 LSD

FREQUENCY

Range:	Jaw: 40-400Hz; Test leads: 10Hz to 2 kHz ACD-14 w/ test leads: 10Hz to 100kHz
Accuracy:	±0.5% rdg. + 4 LSD

AC/DC MICROAMPS (**ACD-14 only**)

Range:	400.0μA, 2000μA
Accuracy:	DC: ±1.5% rdg. + 4 LSD; AC: ±2.0% rdg. + 5 LSD

TEMPERATURE (**ACD-14 only**)

Range:	-4 to 572°F (-20 to 300°C)
Accuracy:	±2.0% rdg. + 6°F

Model	Description	Price
ACD-10PRO	Clamp-on Meter	\$166.00
ACD-10TRMSPRO	Clamp-on Meter, True RMS	\$253.00
ACD-14	Clamp-on Meter w/ Temperature	\$204.00

AC/DC CLAMP-ON METER

Features:

- Performs True rms measurements and frequency or duty cycle measurements
- Allows simultaneous monitoring of current loads and frequency
- Detects the presence of harmonics in neutral conductors
- Backlit, fully annunciated dual LCD display
- Resolution of display is adjustable: 3-3/4 or 4-1/2 digit, 4,000/ 20,000 counts
- 1mS Peak Hold (Max and Min recorded) - capture spikes, glitches, motor run and start currents (AC or DC)
- Dynamic Recording - Max., Avg. or Min. (100mS response)
- Relative Zero Mode subtracts a stored value from the present measurement and displays the result
- Data Hold
- 43 segment analog bargraph
- Auto power off and sleep mode
- Audible continuity test
- Diode test
- Auto and manual ranging
- Overload protection on all functions
- Handguard design



Specifications:

DC VOLTAGE

Range: 4, 40, 400, 1000V
Resolution: 1, 10, 100mV, 1V
Accuracy: $\pm(0.5\% \text{ rdg.} + 3 \text{ dgt.})$ to 400V

AC VOLTAGE

Range: 4, 40, 400, 750V
Resolution: 1, 10, 100mV, 1V
Accuracy: $\pm(1.5\% \text{ rdg} + 5 \text{ dgt})$ to 400Hz

DC CURRENT

Range: 40, 400, 1000A
Resolution: 0.01, 0.1, 1A
Accuracy: $\pm(1.5\% \text{ rdg} + 3 \text{ dgt})$ @ 400A range

AC CURRENT

Range: 40, 400, 1000A
Resolution: 0.01, 0.1, 1A
Accuracy: $\pm(2\% \text{ rdg} + 5 \text{ dgt})$ @ 400A range, 40-65Hz

RESISTANCE

Range: 400, 4k, 40k, 400k, 4M, 40M Ω
Resolution: 0.1, 1, 10, 100 Ω , 1k, 10k Ω
Accuracy: $\pm(1\% \text{ rdg.} + 3 \text{ dgt.})$ to 4M Ω

FREQUENCY (AC coupling)

Range: 200Hz, 2k, 20k, 200kHz
Resolution: 0.01, 0.1, 10, 100Hz
Accuracy: $\pm(0.2\% \text{ rdg.} + 4 \text{ dgt.})$

Model	Description	Price
ACDC-3000	True RMS AC/DC Clamp-on Meter	\$795.00

AC/DC CLAMP-ON METER

Features:

- True RMS AC and DC current and voltage measurements
- Capacitance measurement up to 4000 μF
- Resistance measurement up to 4k Ω
- Single, dual and differential temperature measurement with one or more optional Type-K thermocouples and Single Type-K adapter **Model TAC-DMM** or Dual Type-K adapter **Model DTKA-620**
- Dual display of temperature in both $^{\circ}\text{C}$ and $^{\circ}\text{F}$
- Fully annunciated 4000-count, 4-digit LCD
- Audible and visual continuity indicators
- Dynamic Min/Max/Avg recording
- Overload protection on all ranges
- PEAK Hold (1ms response)
- Data HOLD
- Sleep mode
- Auto/Manual ranging
- Auto power off
- Low battery indicator
- Drop proof
- Auto Relative/Zero reference



Specifications:

DC VOLTAGE

Range: 400V, 1000V
Resolution: 0.1V, 1V
Accuracy: $\pm(1\% \text{ rdg.} + 3 \text{ dgt.})$

AC VOLTAGE

Range: 400V, 1000V
Resolution: 0.1V, 1V
Accuracy: $\pm(1.5\% \text{ rdg.} + 3 \text{ dgt.})$ (45-400Hz)

DC CURRENT

Range: 400A, 1000A
Resolution: 0.1A, 1A
Accuracy: $\pm(1.5\% \text{ rdg.} + 3 \text{ dgt.})$ @ 400A range

AC CURRENT

Range: 400A, 1000A
Resolution: 0.1A, 1A
Accuracy: $\pm(2\% \text{ rdg.} + 5 \text{ dgt.})$ @ 400A, 45-65Hz

RESISTANCE

Range: 400 Ω , 4k Ω
Resolution: 0.1 Ω , 1 Ω
Accuracy: $\pm(1\% \text{ rdg.} + 3 \text{ dgt.})$

TEMPERATURE

Range: -40 ~ 1372 $^{\circ}\text{C}$ / -40 ~ 2502 $^{\circ}\text{F}$
Resolution: 1 $^{\circ}\text{C}$ / 1 $^{\circ}\text{F}$
Accuracy: $\pm(0.5\% \text{ rdg.} + 3^{\circ}\text{C}/6^{\circ}\text{F})$

CAPACITANCE

Range: 400 μF , 4000 μF
Resolution: 0.1 μF , 1 μF
Accuracy: $\pm(3\% \text{ rdg.} + 4 \text{ dgt.})$ @ 400 μF

Model	Description	Price
AC/DC-620T	AC/DC Clamp Meter w/ Temperature	\$495.00

AC/DC CLAMP-ON METERS



Features:

- True RMS AC and DC measurement
- Capable of measuring up to 2000A AC and DC
- Accuracy of 1% regardless of how complex or distorted the waveform is
- Autorange and Auto-zero
- Continuity and diode test
- Data hold and Peak hold capability
- Analog output

Specifications:

Model	DCM24R	DCM104R	DCM204R
AC Current Range:	200A	1000A	2000A
DC Current Range:	200A	1000A	2000A
AC Voltage Range:		600V	
Resistance Range:		400Ω, 4kΩ	
Basic Accuracy:		±1.3% rdg. ±3 dgt.	
Conductor Size:		50mm	

Model	Description	Price
DCM24R	AC/DC Clamp-on Meter, 200A	\$696.00
DCM104R	AC/DC Clamp-on Meter, 1000A	\$696.00
DCM204R	AC/DC Clamp-on Meter, 2000A	\$805.00

AC/DC CLAMP-ON METER



Features:

- Measures AC and DC current up to 2000A, plus AC and DC voltage up to 750V and 1000V, respectively
- Tear drop shaped jaws for ease of use in narrow and crowded cable areas
- Safety design throughout. No exposed metal parts. Shielded banana plugs and recessed input terminals.
- Data hold function to freeze readings
- Single Power/Function/Range switch for one hand operation

Model	Description	Price
2003A	AC/DC Clamp-on Meter	\$699.00

Specifications:

DC VOLTAGE

Ranges: 20V, 200V, 1000V
Accuracy: ±1.0% rdg. + 2 dgt.

AC VOLTAGE

Ranges: 200V, 750V
Accuracy: ±1.5% rdg. ±2 dgt. (56/60 Hz);
±1.5% rdg. ±4 dgt. (40Hz - 1kHz)

RESISTANCE

Ranges: 200Ω, 1500Ω
Accuracy: ±1.5% rdg. + 2 dgt.

DC CURRENT

Ranges: 200A, 2000A
Accuracy: ±1.5% rdg. ±2 dgt.

AC CURRENT

Ranges: 200A, 2000A
Accuracy: ±1.5% rdg. + 2 dgt. (50/60 Hz);
±1.5% ±4 dgt. (40Hz - 1kHz)

DIODE TEST

Range: 0 to 1500 mV
Accuracy: ±1.5% rdg. ±2 dgt.
Open Circuit Voltage: 3V approx.
Measuring Current: 1 mA constant
Output Voltage: 200mV for 200A AC/DC & 2000V AC/DC full scale

Withstand Voltage:

2500 VAC max. for 1 min. between electrical circuit & housing case or metal section of transformer jaws

Frequency:

40Hz to 1kHz

GENERAL

Conductor Size: Approx. 55 mm max.
Power Supply: One 9V battery
Ambient Conditions: -10 to 50°C, below 85% R.H.
Dimensions: 245(L) x 70(W) x 42(H) mm
Weight: Approx. 500 g

AC/DC CLAMP-ON METER

Features:

- AC/DC current measurement up to 400A
- AC/DC voltage measurement up to 600V
- Continuity test
- Max/Min recording
- Relative measurement
- Auto or manual range selection
- Data hold
- Display backlight
- Analog bargraph
- Accommodates conductors up to 1.18" (30mm) in diameter
- Cat III, 600V safety rating



Specifications:

DC VOLTAGE

Ranges: 400.0mV/4.000/40.00/400.0/600V
Accuracy: ±1.0% rdg. + 2 dgt.

AC VOLTAGE

Ranges: 400.0mV/4.000/40.00/400.0/600V
Accuracy: ±1.2% rdg. ±3 dgt.

AC/DC CURRENT

Ranges: 40.00/400.0A
Accuracy: ±2% rdg. ±10 dgt.

RESISTANCE

Ranges: 400.0Ω/4.000/40.00/400.0kΩ/
4.000/40.00MΩ
Accuracy: ±1% rdg. + 5 dgt. to 400.0kΩ

Model	Description	Price
ACDC400	AC/DC Clamp-on Meter	\$699.00
AC-006	Line Splitter	\$699.00

POWER QUALITY CLAMP-ON METERS

Features:

- True RMS measurements
- Voltage and current harmonics up to 25th with THD% (**ACD-55HPQ** & **ACD-56HPQ**)
- Active, reactive and apparent power single/three-phase (**ACD-51HP** & **ACD-56HPQ**)
- Power Factor, Cos ϕ single/three-phase energy (**ACD-51HP** & **ACD-56HPQ**)
- Phase sequence with single wire
- Frequency with test leads and jaw
- Max/Min/Avg recording
- Fast Peak function (1ms)
- Data hold
- Autoranging
- Auto power off
- Display backlight
- Cat. III 600V safety rating



Specifications:

AC/DC VOLTAGE

Range: 1.6 to 599.9V
Accuracy: ±1% rdg. + 3 dgt.
AC Peak Voltage: 10 to 850V
Accuracy: ±5% rdg. + 10 dgt.

AC CURRENT

Range: 0 to 399.9A
Accuracy: ±1% rdg. ±3 dgt.
AC Peak Current: 10 to 800A
Accuracy: ±5% rdg. + 10 dgt.

RESISTANCE

Ranges: 0 to 499.9/999/1999Ω
Accuracy: ±1% rdg. + 5 dgt.

FREQUENCY

Ranges: 40.0 to 399.9Hz
Accuracy: ±0.5% rdg. + 1 dgt.

VOLTAGE/CURRENT HARMONICS (**ACD-55HPQ**, **ACD-56HPQ**)

Ranges: THD, individual harmonics 1 to 25
Accuracy: ±10.0% rdg. + 5 dgt. (1 to 16 harmonics)

POWER QUALITY (**ACD-51HP**, **ACD-56HPQ**)

Power Ranges: 0.00 to 99.99/999.9 kW, kVAR, kVA
Accuracy: ±3.5% rdg. + 3 dgt.
Power Factor: 0.20 to 1.00
Accuracy: ±2% rdg. + 2 dgt.

Model	Description	Price
ACD-51HP	Power Quality Clamp-on Meter	\$1014.00
ACD-55HPQ	Power Quality Clamp-on Meter	\$811.00
ACD-56HPQ	Power Quality Clamp-on Meter	\$1216.00

POWER CLAMP METER

Features:

- AC/DC current up to 2000A
- 4-digit resolution
- W, VA, VAR, kWh and PF even on distorted waveforms
- 3-phase power capability
- Internal logging of five parameters with 5000 readings
- True RMS measurement
- Hall-effect technology
- Backlit LCD displays up to five parameters at a time plus waveforms, harmonics and chart trends

Exceptionally versatile meter performs the work of several bench-type instruments in a package not much larger than a standard clamp-on volt/amp meter. The **DCM2000P** measures and logs power parameters, displays waveforms and harmonic content "live", logs data internally or directly to a PC.



Specifications:

	Range	Accuracy
Current:	0-2000 A, 3 ranges	±1.5% rdg. ±5 dgt.
Voltage:	0-750 V, 4 ranges	±1% rdg. ±5 dgt.
kW/kVA:	0-1200 kW/kVA, 4 ranges	±2.5% rdg. ±5 dgt.
kVAR:	0-850 kVAR, 4 ranges	±2.5% rdg. ±5 dgt.
kWH:	0-40,000 kWh, 5 ranges	±0.5% rdg. (40/70Hz)
Frequency:	10 Hz to 1 kHz	±3% rdg. ±5 dgt.
Crest Factor:	1 to 5	±3% rdg. ±5 dgt. (1-3) ±5% rdg. ±5 dgt. (3-5)
THD:	1 to 600%	±3% rdg. ±5 dgt. (1-99) ±5% rdg. ±5 dgt. (>100)
DF:	1 to 100%	±3% rdg. ±5 dgt.

GENERAL

Safety Standards:	IEC 1010-1-1992; EN 61010-1 1992-09; 600V Cat. IV (750V Cat. III)
Jaw Capacity:	2.36" (60mm)
Power Supply:	Six 1.5V alkaline batteries
Dimensions:	12 x 3.75 x 2" (300 x 98 x 52mm)
Weight:	1.8 lb (820g)

Model	Description	Price
DCM2000P	Digital Power Clamp Meter	\$1975.00
6220-633	PowerLog™ Windows Software & Cable	\$231.00

POWER CLAMP METER

Features:

- Performs 7 power measurements
- True RMS AC, DC, and AC + DC
- Direct measurement of balanced three-phase power
- Data hold
- Min/Max/Avg recording
- 3-1/2 digit, 4000-count display plus 25-segment bargraph
- Optional logging and analysis software

Read power, apparent power, reactive power, and power factor. True RMS functioning gives you accurate results even with distorted waveforms.

Unlike many other meters, this unit is reliable even when you're measuring waveforms with a content of high-order harmonic current, such as electronic drives and frequency converters. You can balance loading on three-phase supplies (star or delta), check actual consumption against plate ratings, and check feeder lines from a main supply.

For long-term monitoring and data analysis, order PowerLog™ Windows software. It will give a multi-parameter display, or mimic a Y-t chart recorder or datalogger. You can export the data to your PC for detailed analysis with Microsoft Excel® or other packages.



Specifications:

	Range	Accuracy
Current:	400, 100A DC or peak AC	±1.5% rdg. ±5 dgt. >20A
Voltage:	400, 600V DC coupled, true RMS	±1% rdg. ±5 dgt. >40V
Power (1Ø, 3Ø):	40, 400, 600kW (to 425kW AC)	±2.5% rdg. ±5 dgt. 0.08kW < 2kW, 1Ø: 0.25 kW < 4kW, 3Ø
VA (1Ø, 3Ø):	40, 400, 600kVA	±2.5% rdg. ±5 dgt. > 2kVA; ±0.08kVA ≤ 2kVA
VAR:	40, 400, 600kVAR	±2.5% rdg. ±5 dgt. > 4kVAR; ±0.25kVAR ≤ 4kVAR
Power Factor:	-0.3 (capacitive), 1.0, +0.3 (inductive); 72.5°, 0, +72.5°	±3°
Frequency:	DC, 20Hz to 1kHz	

GENERAL

Jaw Capacity:	2" (50mm) max.; accepts one 50mm cable or two 30mm cables
Dimensions:	9.9 x 3.9 x 2.1" (251 x 98 x 52mm)
Weight:	1.1 lb (500g)

Model	Description	Price
DCM1000P	Digital Power Clamp Meter	\$992.00
6220-633	PowerLog™ Windows Software & Cable	\$231.00

DIGITAL CLAMP METERS

Model ST-9809 AC Leakage Current Tester

Features:

- 10 μ A resolution
- Large 3-3/4 (4000-count) LCD
- Auto power-off
- Shielded transformer jaws open to 1.2"
- Max/Min, Data hold
- Overload protection
- Supplied with batteries



Specifications:

Current Range:	40mA to 100A AC
Resolution:	10 μ A to 100mA AC
Accuracy:	\pm (1.0% +3 digits)
Voltage Range:	400 VAC
Resolution:	0.1 VAC
Accuracy:	\pm (1.5% +10 digits)
Resistance Range:	40 to 400 Ω
Resolution:	0.1 Ω
Accuracy:	\pm (1.0% +2 digits)
Continuity Test:	40 Ω threshold, beeper at 2.5kHz
Dimensions:	209 x 43 x 30mm
Weight:	200g

Model	Description	Price
ST-9809	AC Leakage Current Tester	\$169.00

Model PC-6009 Power Clamp Meter

Features:

- Low power clamp meter
- High resolution, min. 1 watt
- Resistance of 2k Ω
- True RMS AC readings (2,000/10,000W)
- Measures 200/600 ACA, 600 VAC, 200 VDC, 2k Ω and diode test
- Supplied with batteries



Model	Description	Price
PC-6009	Power Clamp Meter	\$308.00

Model DM-1000 Digital Mini Clamp Meter

Features:

- Precise low ACA measurements
- Measures 20/1000 ACA, 200/100 ADC, ACV, DCV and ohms
- Data hold, Peak hold
- 13mm LCD display
- Supplied with batteries



Model	Description	Price
DM-1000	Digital Mini Clamp Meter	\$264.00

Model DM-6053 Digital Mini Clamp Meter

Features:

- Precise low ACA measurements
- Measures 20/200 ACA, ACV, DCV and ohms
- Data hold, Peak hold
- 13mm LCD display
- Supplied with batteries



Model	Description	Price
DM-6053	Digital Mini Clamp Meter	\$158.00

FORK MULTIMETER

Features:

- Easy current measurement with convenient fork design
- Compact case with built-in probe storage
- Continuity check with buzzer
- Auto power off
- Accommodates cables up to 1/2" in diameter
- Cat. III 600V, Cat. II 1000V, UL , CE



Specifications:

- AC Voltage Range: 0 to 600V
- Accuracy: $\pm 1.5\%$ rdg. + 3 LSD
- DC Voltage Range: 0 to 600V
- Accuracy: $\pm 1.0\%$ rdg. + 2 LSD
- AC Current Range: 0 to 199.9A
- Accuracy: ± 3 rdg. + 3 LSD
- Resistance Range: 0 to 1999 Ω
- Accuracy: $\pm 1.0\%$ rdg. + 2 LSD

Model	Description	Price
ADF-200	Fork Multimeter	\$171.00

ELECTRICAL TESTERS

T5 electrical testers let you check voltage continuity and current with one compact tool. With the **T5**, all you have to do is select volts, ohms, or current and the tester does the rest. Tough test leads stow neatly in the back of the tester, making it easy to tote the **T5** in your tool pouch. The optional **H5** holster keeps the test probes and leads ready to test, and lets you clip the **T5** onto your belt.

Features:

- Measures volts AC or volts DC with precise digital resolution
- Displays resistance to 1000 Ω
- Continuity beeper
- OpenJaw™ current lets you check current up to 1000A without breaking the circuit
- Rugged enough to withstand a 10-foot (3m) drop
- Detachable Slim-Reach™ probe tips are customized for national electrical standards
- Test leads accept Fluke accessory test clips
- Available in 600V and 1000V models
- Can stay connected much longer than solenoid type testers
- Auto off mode to conserve battery life
- **T5-600** protected to CAT III - 600V
- **T5-1000** protected to CAT III - 1000V
- UL 3111 listed, CSA C22.2, VDE



Specifications:

Function	Range	Resol'n	Accuracy	Freq. Resp.
VAC (avg)	1000V	1V	$\pm(1.5\% + 2)$	45 to 440 Hz
VDC	1000V	1V	$\pm(1\% + 1)$	n/a
Resistance	1000 Ω	1 Ω	$\pm(1\% + 2)$	n/a
AAC (open jaw)	100.0A	0.1A	$\pm(3\% + 3)$	45 to 440 Hz

- Continuity Beeper: On at $<25\Omega$, off at $>400\Omega$
- Volts Indicator: Guaranteed on by 30 VAC
- Power Supply: Two AA zinc chloride
- Battery Life: 200 hr. zinc chloride, 400 hr. alkaline
- Operating Temp.: -10 to 50°C
- Temp. Coefficient: 0.1 x (specified accuracy)/°C ($<18^\circ\text{C}$ or $>28^\circ\text{C}$)
- Max. Operating Voltage: **T5-600:** 600V AC/DC overvoltage Category III
T5-1000: 1000V AC/DC overvoltage Category III between any terminal and earth ground
- Dimensions (H x W x L): 30.5 x 51 x 203 mm (1.2 x 2.0 x 8.0")
- Weight: 0.3kg (10 oz)

Model	Description	Price
T5-600	600V Voltage/Continuity/Current Tester	\$155.00
T5-1000	1000V Voltage/Continuity/Current Tester	\$170.00
H5	Custom Holster	\$26.00
AC285	Large Jaw Alligator Clips	\$21.00
AC220	Industrial Test Clips	\$37.00

M1655E

LCR METER

Features:

- 200 mA fuse provides protection from charged capacitors (>50 VDC)
- Safety yellow, drop-proof case
- Large (0.7") 3 1/2 digit LCD
- Battery included



Specifications:

INDUCTANCE

- Range: 2mH to 20H (5 ranges)
 Resolution: 1μH to 10 mH
 Accuracy: 2mH-2H: ±(2% + 2 dgt); 2-20H: ±(5% + 1 dgt)

CAPACITANCE

- Range: 2nF to 200μF (6 ranges)
 Resolution: 1pF to 100nF
 Accuracy: 0.5μF ±1 dgt

RESISTANCE

- Range: 200Ω to 20MΩ (6 ranges)
 Resolution: 0.1Ω to 10kΩ
 Accuracy: ±1% +3 dgt

Model	Description	Price
K5050	LCR Meter	\$297.00

COMPONENT TESTERS

Features Model CR50:

- Pocket-sized, full range capacitance and resistance meter
- Sort, match, inspect and verify components and check circuits
- Measure capacitance in 9 ranges from 200pF to 20mF
- Seven ranges for resistance from 20Ω to 20mΩ
- Dual zero adjust posts to null strays and test leads
- Special "Low Ohms" range
- Diode test function and continuity beeper
- Oversized, read-at-a-glance display
- Shipped with safety test leads with screw-on alligator clips, protective holster, and manual

Features Model LCR55:

- Measures inductance, capacitance and resistance
- 28 control positions to test a wide range of components
- Tests diodes, microwave diodes and transistors
- Measures inductance in 7 ranges from 200μH to 200H
- Measures capacitance in 9 ranges from 200pF to 20mF
- Measures resistance in 7 ranges from 20Ω to 20MΩ
- Zero out stray resistance with front panel control
- Plug-in test slots and test leads
- Oversized, read-at-a-glance display
- Data hold and max hold
- Auto off
- Shipped with safety test leads with screw-on alligator clips, protective holster, and manual

Specifications:

Model	CR50	LCR55
Inductance:	-	200H
Resolution:	-	0.1μH in 200H range
Capacitance:	20,000μF	20,000μF
Resolution:	0.1pF in 200pF range	0.1pF in 200pF range
Resistance:	20MΩ	20MΩ
Resolution:	0.01Ω in 20Ω range	0.01Ω in 20Ω range
Diode Test:	Yes	Yes
Continuity:	Yes	-



Model	Description	Price
CR50	Capacitance & Resistance Meter	\$124.00
LCR55	LCR Meter	\$279.00

CAPACITANCE METER

Features:

- Accuracy $\pm 0.5\%$ typically
- Zero adjustment ± 20 pF
- Fuse-protected against charged capacitors
- Large (0.5") 3 1/2 digit LCD readout
- Overload/out of range indication
- Battery included

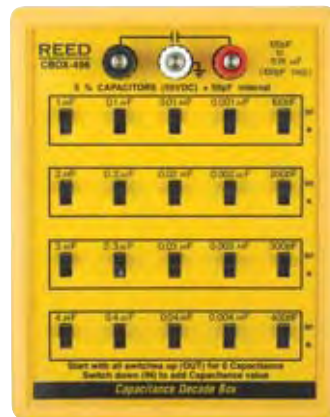
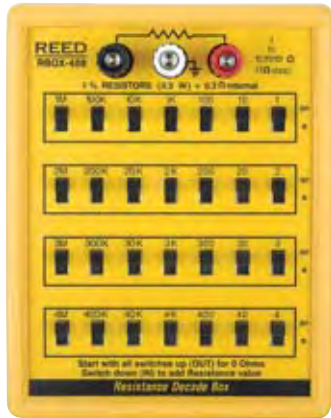


Specifications:

Range	Resolution	Accuracy
200 pF	0.1 pF	$\pm 0.5\% \pm 1$ digit
2 nF	1 pF	$\pm 0.5\% \pm 1$ digit
20 nF	10 pF	$\pm 0.5\% \pm 1$ digit
200 nF	100 pF	$\pm 0.5\% \pm 1$ digit
2 μ F	1000 pF	$\pm 0.5\% \pm 1$ digit
20 μ F	0.01 μ F	$\pm 0.5\% \pm 1$ digit
200 μ F	0.1 μ F	$\pm 0.5\% \pm 1$ digit
2,000 μ F	1 μ F	$\pm 1.0\% \pm 1$ digit
20,000 μ F	10 μ F	$\pm 2.0\% \pm 2$ digit

Model	Description	Price
K5020	Capacitance Meter	203.00

DECADE BOXES



Common Features:

- 3 binding posts permit isolated substitutions
- Slide switches allow user to simply add or subtract for desired value
- Dimensions: 4.6 x 5.8 x 2.0" / 117 x 147 x 52 mm

Model RBOX-408 Features:

- 1% resistance substitution from 1 to 11,111,110 Ω
- Seven decades of resistance
- Values can be set in 1 Ω increments

Model CBOX-406 Features:

- 100 pF to 11,111 μ F, 100 pF per step; excellent for circuit development
- Five decade ranges of capacitance

Model	Description	Price
RBOX-408	Resistance Decade Box	179.00
CBOX-406	Capacitance Decade Box	238.00

WATT METER



Features:

- Digital multimeter & watt meter in a single compact unit
- Measures AC & DC volts & current & watts
- Measures true power up to 6000 watts
- Manual zero adjust in watt meter mode; automatic zero adjust in multimeter mode
- Sampling time of less than one second
- Designed for one-handed operation
- Front panel has easily accessible & clearly labeled sockets for power & load
- Large (0.5"), easy-to-read LCD readout
- Built-in, fold out stand
- Battery included

Model	Description	Price
DW-6060	Watt Meter	345.00

CLAMP-ON POWER METERS

Features

Model 2050:

- Internal datalogging of up to 2000 readings

Features

Model 2060:

- Internal datalogging of up to 5000 readings
- Distortion factor
- Live harmonics analysis and bargraph display
- Datalogging of waveform and harmonics



Common Features:

- Current clamp, power quality analyzer, oscilloscope and data logger in one instrument
- Rotary switch function selection
- Display up to 5 parameters including True RMS, Peak, Crest Factor, Fundamental Frequency and THD for volts and amps
- W, VA, VAR, kWh and power factor measurement for single and balanced three-phase systems
- Min, Max, Avg and 5 parameter internal logging
- Digital output for external datalogging download
- Conformance to IEC1010-1 600V Cat. IV safety standards
- 40, 400, 2000A AC + DC
- 4, 40, 400, 600V AC + DC
- Digital output for external download
- 60mm Ø jaw opening

Model	Description	Price
LH2050	AC/DC Clamp-on Power Meter	\$1429.00
LH2060	AC/DC Clamp-on Power Meter	\$1895.00
PCL2E	WinLog Software and Interface Cable	\$255.00

CLAMP-ON POWER METERS

Common Features:

- True RMS measurements
- Power factors and power shift
- Measurement of total harmonic distortion
- Large backlit display with 3 reading levels (3 x 10,000 counts)
- Display Hold
- Cat. III 600V safety rating

Additional Features

Model F27:

- Special measurements on transformers in the presence of harmonics
- Harmonics distortion parameters from the 1st to the 25th
- RS-232 optical output
- Includes probe, set of leads, batteries, software, optical cable, carrying case and user's manual



Model

	F23	F27
Current Range:	300mA to 1000A ac/dc (1500A pk)	
Voltage Range:	50mV to 600V ac (1500V pk)	
Peak Value:	PEAK ±2ms	
Crest Factor:	1 to 10	
Frequency:	0.5 to 20kHz	
Active Power:	600kWac/dc	
Reactive Power:	600kVARac/dc	
Apparent Power:	600kAac/dc	
Power Factor:	0 to 1	
Displacement Power Factor:	-1 to +1	
Total Harmonic Distortion:	0.2 to 600%	
Distortion Factor:	0.2 to 100%	
Ripple Rate:	-	2 to 1000%
K Factor:	-	1 to 30
CBEMA Factor:	-	0.2 to 1
THD order by order to 25th	-	Absolute value (A/V) or relative value (%) of THD & DF
RS-232 Output:	-	Configurable
Record:		Min, max and average
Smoothed Value:		Over 3s
Monitoring Mode:		Programmable: 1 to 60 minutes
Jaw Opening:		1.7" (43mm)
Conductor Size:		Cable: 1.97" (50mm); 2 busbars: 1.97 x 0.20" (50 x 5mm) 1 busbar: 3.15 x 0.20" (80 x 5mm)

Model	Description	Price
1208.56	F23 Clamp-on Power Meter	\$1310.00
1208.57	F27 Clamp-on Power Meter	\$1385.00

CLAMP-ON HARMONIC METER



Features:

- Designed for traditional and nonlinear loads
- Simple clamp-on operation and power quality analysis
- No menus, no calculations and no analyzing
- Accurate, true rms readings of current and voltage
- Direct reading of %THD, %DF, CF and Peak
- Recording mode for Min, Max, Avg and Max Peak
- Works with oscilloscopes as a harmonic and current transducer
- Designed to EN 61010, 600V Cat. III safety standards

Specifications:

Current Range:	0.05 to 700Arms, 0.05 to $\pm 999.9A$ pk
Voltage Range:	0.05 to 600Vrms, 0.05 to $\pm 1200V$ pk
Total Harmonic Distortion:	0.5% to 600.0%, 25th order
Distortion Factor:	0.5% to 100%
Crest Factor Range:	1.00 to 10.00
CF Resolution:	0.01
Frequency:	0.5 to 9999Hz
Analog Output:	1mV/A (0.5 to 700A) or 10mV/A (0.05 to 60A)
Jaw Opening:	1.7" (43mm)
Conductor Size:	Cable: 1.65" (42mm); 2 Cables: 1" (25.4mm); 2 Busbars: 1.97 x 0.20" (50 x 5mm)

Model	Description	Price
1208.52	721 Clamp-on Harmonic Meter	\$412.00

CLAMP-ON HARMONIC METER



Features:

- 31 segment analog bargraph
- Accurate, true rms readings of current and voltage
- Direct reading of %THD, %DF, CF, Peak (+ or -)
- Smooth function for stable readings
- Auto or manual ranging
- Peak measurements (AC or DC, + or -)
- Recording mode for Min, Max, Avg and Max Peak
- Percent ripple for DC
- Auto off and battery level indication
- Designed to EN 61010, 600V Cat. III safety standards

Specifications:

AC Current Range:	0.05 to 1000Arms, 0.5 to $\pm 1500A$ pk
AC Voltage Range:	0.05 to 600Vrms, 0.05 to $\pm 1500V$ pk
Crest Factor:	>5 below 300V
DC Current:	0.03 to $\pm 1500A$
DC Voltage:	0.05 to $\pm 600V$
Total Harmonic Distortion:	0.2% to 1000%
Distortion Factor:	0.2% to 100%
Individual Harmonics:	0.2% to 300% (%THD or %DF)
Harmonic Derating Factor:	0.10 to 1.00
K Factor Rating:	1 to 30
Frequency:	0.5 to 20,000Hz
Jaw Opening:	1.7" (43mm)
Conductor Size:	Cable: 1.97" (50mm); 2 Busbars: 1.97 x 0.20" (50 x 5mm); 1 Busbar : 3.15 to 0.20" (80 x 5mm)

Model	Description	Price
2111.39	F25 Clamp-on Harmonic Meter	\$1248.00

POWER METER

Features:

- Selectable single-phase and three-phase settings
- True RMS measurements of current and voltage
- Direct display of multiple measurements for easy reading
- Peak and memory functions for load analysis
- Simple, user-friendly operation
- Large format display
- Built to IEC 348 safety standards
- Supplied complete with 500A current probe, safety rubber housing and hard carrying case



Specifications:

VOLTAGE

Range: 1 to 600Vrms
Accuracy: 1 to 99.9V: 0.5% rdg. $\pm 0.6V$;
100 to 600V: 0.3% rdg. $\pm 2V$

CURRENT

Range: 1 to 500Arms
Accuracy: 0.25A: $\pm 5\%$ rdg. phase 4° ; 100A: $\pm 2\%$ rdg. phase 2° ; 500A: $\pm 2\%$ rdg. phase 1.5°

FREQUENCY

Range: 30 to 999Hz
Accuracy: 30 to 100Hz: 0.03% rdg. $\pm 0.1Hz$;
101 to 999Hz: 0.03% rdg. $\pm 1Hz$

POWER FACTOR

Range: -0.00 (lag) to +0.00 (lead)
Accuracy: Sum of V & A accuracy, plus probe phase shift

ACTIVE POWER

Range: 30 to 300kW
Accuracy: Sum of V & A accuracy

REACTIVE POWER

Range: 0 to 300kVAR
Accuracy: Sum of V & A accuracy @ $\sin = 1$ plus probe phase shift

APPARENT POWER

Range: 0 to 300kVA
Accuracy: Sum of V & A accuracy

Model	Description	Price
2111.27	3910 True RMS Power Meter	\$969.00

POWER QUALITY ANALYZER

Features:

- Hand-held single-phase power quality analyzer
- Large backlit colour display
- Unique power quality overview mode
- AC voltage and current measurement via flexible CT up to 3000A
- Low current measurement via optional CT (10mA)
- mV/A input for installed current transformers
- W, VA, VAR, kWh and power factor measurement, even for distorted waveforms
- Trms, Peak, Crest Factor, THD, DF and Frequency for current and voltage
- Harmonics to the 50th with magnitude and phase information
- Measurement of dips, sags, swells, flicker and transients
- Inrush current measurement
- Record function for Min, Max and Average
- Internal datalogging of screen display measurements and full power quality surveying with time and date stamped recordings
- Built-in 3-phase power quality for balanced loads
- Each unit includes 30/300/3000A flexible CT, voltage leads, basic software, and carrying case



Specifications:

VOLTAGE

Nominal Range: Star: 115/230/480V; Delta: 200/400/830V
Intrinsic Error: 115V - 830V - 0.2%
Resolution: 0.1V

CURRENT

Range: 30/300/3000A
Intrinsic Error: 0.5% (excludes probes)
Resolution: 0.01A

POWER

Intrinsic Error: 1%
Resolution: 1W

FREQUENCY

Range: 45-65Hz
Intrinsic Error: 0.2%
Resolution: 0.01Hz

HARMONICS:

1st-40th Vrms, Irms, THD V, THD I

EVENTS

Intrinsic Error: 1%

FLICKER:

FL, Pst, Plt, IEC 1000-4-15

Intrinsic Error: 3%

Model	Description	Price
ANQ70	Power Quality Analyzer	\$2695.00
ANQ70-DV	Power Quality Analyzer w/ Dran-View™	\$3850.00

HARMONICS ANALYZER



Features:

- The Harmonalyzer takes a 'snapshot' of the waveform(s) and does all computations within 3 seconds
- Displays magnitude and percentage of each harmonic plus THD
- Displays two cycles as well as the true RMS and frequency
- Displays WATTS, VARS, VA, True Power Factor, displacement PF and dVA
- Allows you to SAVE the measured waveform(s), RECALL or DELETE previously saved waveforms, or DOWNLOAD the complete memory bank of 21 waveforms to your PC
- Backlit, super twisted LCD with adjustable contrast
- Includes **HACT-2CE** 1000A current transducer and PC software

Specifications:

AC/DC Voltage Range:	1 to 600.0Vrms; 1000V pk
Accuracy:	±2% rdg.
AC Current Range:	1 to 1000 Arms
Accuracy:	±2% rdg.
Power:	0 to 600 kW
Accuracy:	±2% rdg.
Harmonics Range:	Up to 31st
Accuracy:	±2% rdg. + 6 LSD
Power Factor Range:	0.00 to 1.00
Accuracy:	±0.01
Frequency Range:	40.0 to 65.0 Hz
Accuracy:	±0.1Hz

Model	Description	Price
HA-2000	Harmonics Analyzer	\$2025.00
HACT-1/10	3000A Current Transducer	\$1920.00
HACT-100/1	10A Current Transducer	\$552.00

RECORDER/DATALOGGER

Features:

- Single or three phase capable
- Three channels for voltage measurements and four channels for current measurements
- Auto-ranging
- All readings are True RMS
- Power measurements include: Watts, Vars, VA, PF
- Energy measurements include: KW-HRs, Demand or Non-demand
- User selectable variable length recording mode
- Data can be viewed in the field via large self-contained backlit graphic display or downloaded and accessed through a PC
- Rugged, weatherproof ABS plastic case
- Line operated (120/240 VAC, 50/60 Hz)



Specifications:

Ranges:	Voltage: 5 to 600 Vrms; Current: 1 to 1000 Arms
Accuracy:	Voltage: ±1% rdg. +3 LSD; Current: ±1% rdg. +3 LSD
Power Measurement:	Real Power P (watts), Apparent Volt-amperes S (VA), Reactive Volt-amperes Q (VAR), True Power Factor (tPF)
Energy Measurement:	Kilowatt Hours (kWH), Demand (kW)
Frequencies:	50/60Hz
Recording Rates:	User selectable from 1 hour to several months
Memory:	Total of 600K RAM
PC Interface:	RS-232 serial interface
Power Supply:	AC line voltage w/ battery backup, 6 x "D" alkaline batteries (not supplied)
Dimensions:	17.5" x 11.6" x 7.5"
Weight:	16 lbs. w/ batteries, 4 current transducers, voltage leads and alligator clips

Model	Description	Price
DM-II	Digital Recorder/Datalogger	\$4395.00

POWER QUALITY RECORDERS



Features:

- True RMS measurements
- Works with single and three phase systems
- Detects and records voltage anomalies (sag and surges)
- Built-in scope displays waveforms
- Records up to 64 parameters (single or three phase) simultaneously
- Manual and programmable recording start
- Selectable fundamental frequency of 50 or 60Hz
- Special data compression system and user selectable rates allow recording from several hours to several years
- Download capabilities with Windows compatible software
- Password protection
- Line or battery operated
- Cat. III, 600V phase to phase, Cat. III, 300V phase to ground

Specifications:

- AC Voltage Range: 0 to 600 Vrms
 Accuracy: $\pm(0.5\% \text{ rdg.} + 2 \text{ LSD})$
 AC Current Range: **DM-III:** 5 to 1000A;
DM-III FLEX: 15 to 3000A
 Accuracy: $\pm(0.5\% \text{ rdg.} + 2 \text{ LSD})$
 Harmonics: THD, DC & individual up to 49th
 Accuracy: $\pm(0.5\% \text{ rdg.} + 2 \text{ LSD})$ @ DC to 25th
 Power Measurement: Working (W), Reactive (VAR), Apparent (VA)
 Accuracy: $\pm(1.0\% \text{ rdg.} + 2 \text{ LSD})$
 Energy Measurement: Working (kWh), Reactive (VARh), Apparent (VAh)
 Accuracy: $\pm(1.0\% \text{ rdg.} + 2 \text{ LSD})$
 Peak Demand: kW
 Accuracy: $\pm(1.0\% \text{ rdg.} + 2 \text{ LSD})$
 Frequency Measurement: 57 to 63.6 Hz at 60Hz fundamental;
 47 to 53 Hz at 50Hz fundamental;
 Selectable fundamentals
 Accuracy: $\pm(1.0\% \text{ rdg.} + 2 \text{ LSD})$
 Power Factor: 0.00 to 1.00
 Phase Sequence: 1-2-3
 Co-generation: Measures absorbed and generated power and energy
 Recording Times: Several hours to several years
 Current Transducer: **DM-III:** 1000A, 2" I.D. CT;
DM-III FLEX: 3000A, flexible 7" I.D. CT

Model	Description	Price
DM-III	Digital Recorder/Datalogger w/ 1000A CT	\$6276.00
DM-III FLEX	Digital Recorder/Datalogger w/ 3000A CT	\$7569.00

POWER ANALYZERS

Features Model DW-6090:

- Watts, VA, Power Factor, ACV, ACA, VAR, Whr, DCV, DCA and resistance
- True rms measurements of Watts, ACV and ACA
- Large digital multi-displays
- Accepts current probe and current transducer input
- RS-232 interface
- Battery powered



Features Model

DW-6091:

- Large digital multi-displays
- True rms measurements of Watts, VA, Whr, Power Factor, ACV, ACA and frequency
- Accepts external current transducer input
- RS-232 interface
- Battery powered



Model	Description	Price
DW-6090	Bench Power Analyzer	\$594.00
DW-6091	Portable Power Analyzer	\$369.00
SW-U801-WIN	Windows Compatible Software	\$97.00
UPCB-02	RS-232 Cable	\$30.00

POWER QUALITY ANALYZERS

Features:

Model	434	433	43B
Application	3-phase	3-phase	1-phase
Inputs	4 voltage & 4 current (3 phases & neutral)		1 voltage & 1 current
Measurements			
Vrms, Arms, Hz, W, VA, VAR, PF, DPF, Crest	•	•	•
Harmonics, THD, k-factor	•	•	•
Inter-harmonics	•	Optional*	
kWh, kVARh, kVah	•	Optional*	
Flicker (Plt, Pst, PF5)	•	•	
Unbalance	•	•	
Recorder	•	•	•
AutoTrend	•	•	
System Monitor	•	•	
Real-time Scope	•	•	•
Phasor Diagrams	•	•	
Sags & Swells	•	•	•
Half-cycle Based	•	•	
Transient Display	•	Optional*	•
Inrush Current	•	Optional*	•
Built-in Scope & DMM			•
Memory (Screens/Data)	50/10	25/5 standard 50/10 optional*	20
Software & Cable	•	Optional*	Depends on configuration
Safety Rating	600V Cat IV/1000V Cat III		600V Cat III

* Optional features can be added with upgrade kit



Model 433

Model 43B

Model	Description	Price
433	Three Phase Power Quality Analyzer	\$5425.00
434	Three Phase Power Quality Analyzer	\$6587.00
433/UGK	Upgrade Kit for Model 433	\$1317.00
43B/633	Single Phase Power Quality Analyzer	\$3402.00
i200s	200A AC Current Probe	\$237.00
i1000S	1000A AC Current Probe	\$565.00
i2000flex	2000A AC Flexible Current Probe	\$406.00
80TK	Thermocouple Module	\$118.00
80T-IR	Infrared Temperature Probe	\$263.00
PAC91	Parallel Printer Adapter	\$330.00

Specifications:

Function	MODELS 433 & 434			MODEL 43B	
	Range	Resolution	Accuracy	Range	Accuracy
VOLTS/AMPS/HZ					
Volts (AC + DC)	1 to 1000Vrms	0.1Vrms	±0.5%	5.000V to 1250V	
Amps (AC + DC)	0 to 20,000Arms	0.001 to 10Arms	±1% rdg ±5 cts	50.00A to 50.00kA	±1% rdg +10 cts
Frequency	42.50 to 69.00Hz	0.1Hz	±0.1%	40.0 to 70.0 Hz	±0.5% rdg +2 cts
POWER/ENERGY					
Watt	1.0W to 20.00MW	0.1W to 1kW	±1.5% rdg ±10 cts	250 to 2.5MW	±4% rdg +4 cts
VA	1.0VA to 20.00MVA	0.1VA to 1kVA	±1.5% rdg ±10 cts	250 to 2.5MW	±4% rdg +4 cts
VAR	1.0VAR to 20.00MVAR	0.1VA to 1kVA	±1.5% rdg ±10 cts	250 to 2.5MW	±4% rdg +4 cts
kWh	0kWh to 200.0GWh	0.01 to 100Wh	±1.5% rdg ±10 cts		
kVA	0kVAh to 200.0GVAh	0.01 to 100VAh	±1.5% rdg ±10 cts		
kVAR	0kVARh to 200.0GVARh	0.01 to 100VARh	±1.5% rdg ±10 cts		
PF, DPF	0 to 1	0.01	±0.03	0.25 to 1.00	±0.04
HARMONICS					
DC Volts	0.0 to 1000V	0.1V	±5% rdg ±10 cts	1 st to 51 st harmonic	±3% +2cts to ±15% +5cts
Amps	0.0 to 4000mV*	1mV*	±5% rdg ±5 cts	1 st to 51 st harmonic	±3% +2cts to ±15% +5cts
Watts	Depends on selected clamp & voltage scale		±5% rdg ±10 cts	1 st to 51 st harmonic	±5% +2cts to ±30% +5cts
THD	0.0 to 100.0%	0.1%	±2.5%		
Hz	0 to 3500Hz	1Hz	±1Hz		
SAGS & SWELLS					
Volts (AC + DC)	0.0 to 100% of nominal V	0.1Vrms	±1%	4 min. to 16 days	±2% +10 cts
Amps (AC + DC)	0 to 20,000Arms	0.001 to 10Arms	±1% rdg ±5 cts	4 min. to 16 days	±2% +10 cts
Transient Capture	±6000Vpk	1V	±15% rdg ±2.5%Vrms	20/50/100/200%	±5% f.s.
Inrush Current	0.000 to 20.00kArms	0.001 to 10Arms	±1% rdg ±5 cts	above/below line voltage	
Resistance				1A to 1000A	±5% f.s.
Capacitance				500.0Ω to 30.00MΩ	±0.6% +5 cts
Temperature				50.00nF to 500.0μF	±2% +10 cts
				-100 to 400.0°C/	±0.5% +5 cts
				-200 to 800.0°F	

POWER QUALITY ANALYZER

Introducing a power tool that performs the measurements you need to maintain power systems, troubleshoot power problems and diagnose equipment failures.

Features:

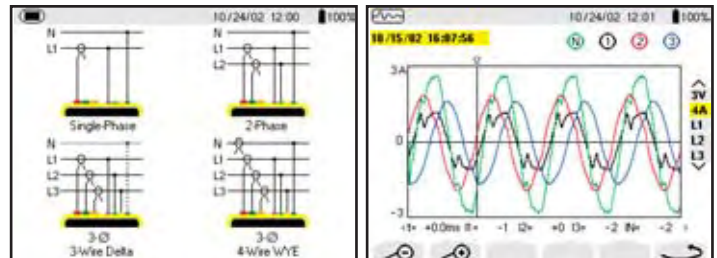
- True single and three phase measurements
- Real time colour display of waveforms including transients
- Easy on-screen graphics for setup
- True rms voltage and current (600V, Cat. III, 3000A)
- Display voltage, current and power harmonics to 50th order, including direction in real time
- Phasor diagram display
- Peak voltage and current
- Nominal frequency from 40 to 70 Hz
- VA, Var and W per phase and total
- kVah, Varh and kWh
- Neutral current
- Crest factors for current and voltage
- K-factor for transformer
- Power factor, displacement PF and tangent
- Captures up to 50 transients
- Short-term flicker and voltage
- Phase unbalance (current and voltage)
- Harmonic distortion (total and individual)
- Alarms, surge and sags
- Recording, date and characteristic of disturbances
- Immediate printout of the screen to a printer
- Screen snapshot function captures waveforms
- Optically RS-232 communication
- Includes DataView® software

Specifications:

Function	Range	Accuracy
Frequency	40 to 60 Hz	±0.01Hz
Single-phase Vrms	6 to 480V	±0.5% ± 2 cts
Phase-to-phase Vrms	10 to 830V	±0.5% ± 2 cts
DC Voltage	6 to 100V	±1% ± 2 cts
Single-phase Vpp	6 to 680V	±1% ± 5 cts
Phase-to-phase Upp	10 to 1360V	±1% ± 2 cts
Crest Factor (Vcf)	1.00 to 9.99	±1% ± 2 cts
Real Power (W)	0 to 9999kW	±1% ± 1 ct
Reactive Power (VAR)	0 to 9999kW	±1% ± 1 ct
Apparent Power (VA)	0 to 999kVA	±1% ± 1 ct
Power Factor (PF)	-1.000 to 1.000	±1.5% ± 1 ct
Active Energy (Wh)	0 to 9999MWh	±1% ± 1 ct
Reactive Energy (VARh)	0 to 9999MVARh	±1.5% ± 1 ct
Apparent Energy (Vah)	0 to 9999MVah	±1% ± 1 ct
Phase Angle	-179 to +180°	±2° ± 1 ct
Harmonics Ratios	0 to 999%	±1% ± 5 cts
	1 to 50 th harmonic	
Total Harmonics Distortion	0 to 999%	±1% ± 5 cts
Current K Factor	1 to 99.99	±5% ± 1 ct
Voltage Flicker	0.00 to 9.99	not specified

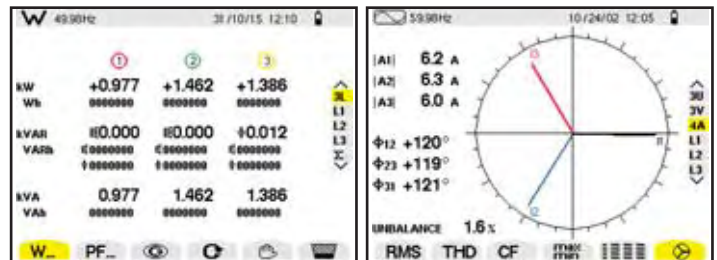


Large colour display!



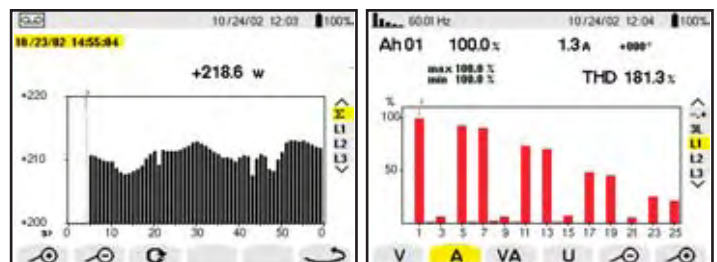
Configuration

Transient Mode



Power/Energy Mode

Phasor Diagram



Recording Mode

Harmonics Mode

POWER QUALITY ANALYZER

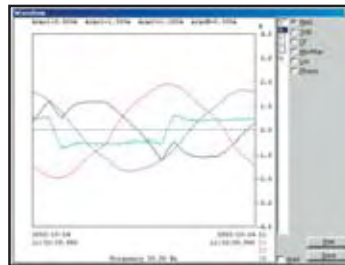


Configure all functions of the PowerPad™ with DataView® Data Analysis and Reporting Software.

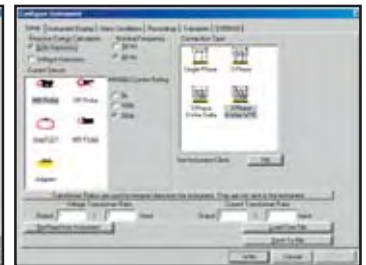
- Display and analyze real time data on your PC
- Configure all PowerPad functions and parameters from your PC
- Customize frames, templates and reports to your exact needs
- Create and store a complete library of configurations that can be uploaded to the PowerPad as needed
- Zoom in and out and pan through sections of the graph to analyze the data
- Display waveforms, trend graphs, harmonic spectrums, text summaries, transients and event logs
- Print reports using standard or custom templates you design

Minimum System Requirements:

- Windows®95/98/200/ME/XP or Windows®NT 4.0
- 32MB of RAM (128MB recommended)
- 35MB of hard disk space (200MB recommended)
- CD ROM drive



Display real time waveforms



Clear and easy setup of all functions from one tabbed dialog box

Choose from a variety of current probe options:



MN93 (200A) or MN193 (20A) probes



PowerPad™ Model 3945 includes meter, set of three MN93 probes (200A), four 10 ft. colour-coded voltage leads, four colour-coded alligator clips, RS-232 DB9F optical cable, NiMH battery, 120V power cord, DataView® Professional software, carrying bag and user manual.



AmpFlex™ 193 (3000A) probes



SR193 (1000A) probes

Model	Description	Price
2130.75	3945 Three Phase Power Quality Analyzer w/ 200A Current Clamp (MN93)	\$4595.00
2130.76	3945 Three Phase Power Quality Analyzer w/ 1000A Current Clamp (SR193)	\$4695.00
2130.77	3945 Three Phase Power Quality Analyzer w/ 24" 3000A AmpFlex™ Current Clamp (Model 193-24)	\$4995.00

INSULATION RESISTANCE TESTER

Features:

- Large, backlit LCD with analog bargraph and digital display
- Three output voltages for insulation resistance testing: 250V, 500V, 1000V
- Insulation resistance testing up to 4000M Ω ; switches automatically to voltage measurement when voltage is greater than 30VAC or 30VDC
- AC/DC voltage measurement up to 600V
- Lo-Ohms function for testing connections
- Last reading memory display
- 4 C-cell batteries for up to 5,000 tests per EN61557-2, with battery-life indicator and auto shut-off
- Audio discharge of capacitive voltage charges
- Heavy duty test leads, alligator clips and test probes
- Rugged, splash-proof case with impact-absorbing holster



Insulation resistance testers can be used to determine the integrity of windings or cables in motors, transformers, switchgear and electrical installations. The test method is determined by the type of equipment being tested and the reason for testing. For instance, when testing electrical cabling or switchgear (low-capacitance equipment) the time-dependent capacitive leakage and absorption leakage currents become insignificant and decrease to zero almost instantly (a minute or less) providing perfect conditions for the spot-reading/short-time resistance test.

Specifications:

Insulation Resistance Range:	4.000, 40.00, 400.0, 4000M Ω
Resolution:	0.001M Ω to 10M Ω
Accuracy:	<100M Ω : 2% + 2 cts; >100M Ω : 10% + 2 cts + 1%/G Ω
Test Voltages:	250, 500, 1000V
Max. Current:	1 mA
Voltage Warning:	\geq 30V AC/DC
Lo-Ohms Range:	0 to 40.00 Ω
Resolution:	0.01 Ω
Accuracy:	2% + 2 cts
Analog Bar Graph	0 to 100 Ω
Voltage Warning:	\geq 30V AC/DC
Resistance Range:	4k Ω
Resolution:	0.01 Ω
Accuracy:	2% + 2 cts
Analog Bar Graph:	0 to 10k Ω
Voltage Range:	0 to 600VAC (50/60Hz); 0 to 600VDC
Accuracy:	2% + 2 cts

Model	Description	Price
1520	Insulation Resistance Tester	\$1015.00

INSULATION RESISTANCE TESTER



Features:

- Test voltages of 250, 500, 1000, 2500, 5000V
- Measures up to 1T Ω
- Warning voltage function alerts the user that voltage is present and gives the voltage reading up to 600V AC or DC
- Guard system eliminates the effect of surface leakage current on high resistance measurements
- Large digital/analog LCD delivers detailed measurement data
- Capacitance
- Leakage current
- Ramp function (0-5000VDC) for breakdown testing
- Timed measurements for dielectric absorption and polarization index tests
- 99 memory locations store all measurement parameters
- High capacity rechargeable batteries
- Mobile charging adapter for DC charging
- Includes software and optical interface cable for downloading

Model	Description	Price
1550B	Insulation Resistance Tester	\$4918.00

MEGOHMMETERS



Common Features:

- Multi-line 4000 count digital display with analog bargraph
- Automatic discharge of test circuit
- Dual, triple or quad test voltages from 50 to 1000V
- Insulation resistance measurement to 20,000MΩ
- Voltage measurement to 600V AC/DC and continuity check to 20Ω
- Automatic test inhibition if >25V, units signal audibly/visually

Additional Features:

- Circuit resistance measurement to 400kΩ (40kΩ **1039**)
- Alarm function for fast repetitive testing (**Models 1040 & 1045**)
- Relative position allows for deviation measurement from a known test resistance (**Models 1035 & 1039**)
- Continuity test at 200mA (**Models 1030, 1040 & 1045**)
- Remote test probe capability (*except 1030*)
- Electroluminescent display backlight (*except 1030*)
- Capacitance measurement to 4000nF (**1039 only**)
- Cable length measurement to 80.0 km (**1039 only**)
- 400mA/AC for direct current measurement or use with AC current probe with mA output to measure higher currents (**1039 only**)
- Timer function (**1045 only**) for easy DAR and PI measurements
- Second digital display for alarm setpoints (**Models 1040 & 1045**) or elapsed time (**1045 only**)

Each unit includes:

- Batteries, two colour-coded test leads, black test probe, two alligator clips, carrying pouch and manual

Each field kit includes:

- Megohmmeter, six 1.5V AA batteries, two colour-coded test leads, black test probe, remote test probe, two alligator clips, AC current probe MN211 (**Model 1039 only**), ABS field case and manual

Model	Description	Price
2115.42	Field Kit w/ 1035 Meter	\$1114.00
2115.43	Field Kit w/ 1039 Meter	\$1379.00
2117.30	Field Kit w/ 1040 Meter	\$975.00
2117.31	Field Kit w/ 1045 Meter	\$1100.00
2118.97	Remote Test Probe for 1040 & 1045	\$222.00
2118.98	Waterproof Field Case	\$196.00
2118.99	Hands-free Carrying Case	\$74.00
2115.73	AC Current Probe	\$125.00

Specifications:

Model	2116.89 (1030)	2116.90 (1035)	2116.91 (1039)	2116.92 (1040)	2116.93 (1045)
DC Test Voltage/ Insulation Resistance	250V: 50k/2000MΩ 500V: 100k/2000MΩ	50V: 0.01MΩ/2000MΩ 100V: 0.02MΩ/2000MΩ 250V: 0.05MΩ/20,000MΩ 500V: 0.1MΩ/20,000	50V: 0.01MΩ/400MΩ 100V: 0.02MΩ/400MΩ	500V: 100k/2000MΩ 1000V: 200k/2000MΩ	250V: 50k/2000MΩ 500V: 100k/2000MΩ 1000V: 200k/2000MΩ
Continuity Range	0.00/20.00Ω	-	-	0.00/20.00Ω	0.00/20.00Ω
AC Current Range	-	-	0/400mA AC	-	-
Resistance Test Range	-	0.0/400kΩ	0.0/400kΩ	0.0/400kΩ	0.0/400kΩ
Voltage Test Range	0-600V AC/DC, voltage warning indication @ >25V				
Accuracy	3% rdg. ±5 cts. @ <40MΩ, 3% rdg. ±2 cts. @ >40MΩ				
Safety Approvals	IEC 1010-1, Cat. III 600V; (model 1035 & 1039), Cat. II 300V; (model 1030, 1040 & 1045) CE Mark; EMC; UL, CSA, VDE				
Power Supply	6 x 1.5V AA alkaline batteries				
Dimensions (LxHxW)	8.31 x 4.26 x 2.36" (211 x 108 x 60mm)				
Weight	29 oz (830g)				
Price	\$593.00	\$835.00	\$975.00	\$690.00	\$830.00

MEGOHMMETERS

Features:

- Test voltage combinations of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 30kΩ to 10,000GΩ
- Selectable and programmable test voltage (50 to 5000V)
- Direct measurement of DAR, PI and DD ratios
- Direct measurement and display of capacitance and leakage current
- Display of test voltage and run time
- Programmable test run times and PI ratio times
- Smooth and Alarm functions
- Programmable alarm setting
- Automatic test inhibition if live sample (>25V)
- Automatic discharge and display of discharge voltage
- Large dual display with time, voltage and measurement
- Bright blue electroluminescent backlight
- Analog bargraph display
- AC or DC powered with rechargeable NiMH batteries
- Auto power-down when not in use
- Rugged weatherproof field case
- EN61010-1, 1000V Cat. III, 2500V Cat. I
- Both models include soft accessory bag with one red, one blue and one black lead with integral 5kV rated hippo clips, one jumper lead for use with guard terminal, rechargeable battery, 120V power cord and user manual
- **Model 5060** also includes PC RS-232, DB9 F/F 6-ft. null modem cable and DataView® software

Specifications:

Model	5050	5060
INSULATION TESTS		
Test Voltage/Range	500V: 30kΩ to 2000GΩ (2TΩ) 1000V: 100kΩ to 4000GΩ (4TΩ) 2500V: 100kΩ to 10,000GΩ (10TΩ) 5000V: 300kΩ to 10,000GΩ (10TΩ)	
Selectable Test Voltage:	Programmable: 40 to 1000V: 10V increments; 1000 to 5000V: 100V increments	
Accuracy	1kΩ to 40GΩ: 5% rdg. ± 3 cts. 40GΩ to 10TΩ: ±15% rdg. ± 10 cts.	
Safety Check:	0 to 1000Vac/dc (16 to 420Hz)	
Voltage Warning:	>25V	
Test Inhibition:	>25V	
Smooth Function:	User selectable digital filtering stabilizes display	
OTHER FEATURES		
Storage Over Time:	4kB memory	128kB memory
Direct to Printer:	No	Preset format
Storage of Results:	20 readings	128kB memory w/ RS-232
Included Software:	No	Yes
Power Supply:	Eight NiMH rechargeable batteries 85 to 256V (50/60Hz)	



Model 5060



Model 2119.46

Model	Description	Price
2130.20	5050 Megohmmeter	\$4174.00
2130.21	5060 Megohmmeter w/ RS-232	\$5289.00
2119.46	RS-232 Cable, DB9 F/F 6-ft.	\$18.00
2119.55	Lead Set, 3, 5-ft. colour-coded, 1000V	\$103.00
2119.76	Lead Set, 3, 10-ft. colour-coded, 5000V	\$380.00

MEGOHMMETERS

Features:

- Test voltage combinations of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 30kΩ to 10,000GΩ
- Selectable and programmable test voltage (50 to 5000V)
- Automatic step voltage with programmable step and dwell times
- Direct measurement of DAR, PI and DD ratios
- Direct measurement and display of capacitance and leakage current
- Display of test voltage and run time
- Programmable test run times and PI ratio times
- Smooth and Alarm functions
- Programmable alarm setting
- Programmable temperature compensation
- Programmable test voltage lock-out
- Automatic test inhibition (if live sample >25V)
- Automatic discharge and display of discharge voltage
- Large graphic display with five line alphanumeric display of all test results
- Bright blue electroluminescent backlight
- AC or DC powered with rechargeable NiMH batteries
- Auto power-down when not in use
- Rugged weatherproof field case
- EN61010-1, 1000V Cat. III, 2500V Cat. I
- Includes soft accessory bag with one red, one blue and one black lead with integral 5kV rated hippo clips, one jumper lead for use with guard terminal, rechargeable battery, 120V power cord and user manual
- Also includes PC RS-232, DB9 F/F 6-ft. null modem cable and DataView® Lite software

Specifications:

INSULATION TESTS

Test Voltage/Range	500V:	30kΩ to 2000GΩ (2TΩ)
	1000V:	100kΩ to 4000GΩ (4TΩ)
	2500V:	100kΩ to 10,000GΩ (10TΩ)
	5000V:	300kΩ to 10,000GΩ (10TΩ)
Selectable Test Voltage:	Programmable:	
		40 to 1000V: 10V increments;
		1000 to 5000V: 100V increments
Automatic Step Voltage:	Programmable voltage & duration in 5 steps. Three profiles can be stored.	
Accuracy	1kΩ to 40GΩ:	5% rdg. ± 3 cts.
	40GΩ to 10TΩ:	±15% rdg. ± 10 cts.
Safety Check:		0 to 1000Vac/dc (16 to 420Hz)
Voltage Warning:		>25V
Test Inhibition:		>25V
Smooth Function:		User selectable digital filtering stabilizes display

OTHER FEATURES

Storage Over Time:	128kB memory
Direct to Printer:	Preset format
Storage of Results:	128kB memory w/ RS-232
Included Software:	Yes
Power Supply:	Eight NiMH rechargeable batteries 85 to 256V (50/60Hz)

Model	Description	Price
2130.30	5070 Megohmmeter	\$6580.00
2119.46	RS-232 Cable, DB9 F/F 6-ft.	\$18.00
2119.55	Lead Set, 3, 5-ft. colour-coded, 1000V	\$103.00
2119.76	Lead Set, 3, 10-ft. colour-coded, 5000V	\$380.00



Model 5070



Model 2119.46

MEGOHMMETERS

Features:

- Test voltage combinations of 50V, 100V, 250V, 500V and 1000V
- Insulation measurements to 4000GΩ (4TΩ)
- Direct measurement of DAR and PI values
- Direct measurement of sample capacitance
- Display of test voltage and run time
- Programmable test run times and PI times
- Smooth and Alarm functions
- Automatic test inhibition (if live sample >25V)
- Automatic discharge after use with voltage display
- Large dual display with time, voltage and measurement
- Bright blue electroluminescent backlight
- Battery powered
- Auto power-down when not in use
- 20 reading memory with adjustable sample rate (**Model 1050**)
- Remote operation with optional test probe
- Rugged dual wall field case with detachable lead/accessory pouch
- IEC1010-1, 600V Cat. III, IEC 61557 and CE rated
- Comes complete with detachable accessory pouch which includes one red, one blue test lead, one black shielded lead, one each black, red and blue colour-coded alligator clips, one black test probe, batteries and user manual

Features Model 1060:

- AC rechargeable NiMH batteries
- RS-232 interface for direct printing of results (serial output)
- 128k memory to store measurements in specific files
- Remote operation of megohmmeter through PC
- Includes in addition, one 6-ft. RS-232 DB9/DB25 F/F to DB9/DB25 F/F cable, rechargeable battery, software, and 120V power cord

Specifications:

INSULATION TESTS

Test Voltage:	50V, 100V, 250V, 500V, 1000V
Measurement Range:	2kΩ to 4000GΩ
Accuracy:	5% rdg. ±3 cts. (2kΩ to 40GΩ)
Safety Check:	0 to 1000V AC/DC
Voltage Warning:	>25V
Test Inhibition:	>25V

RESISTANCE TESTS

Measurement Range:	0.01Ω to 400kΩ
Test Voltage:	12.4 VDC max.
Accuracy:	3% rdg. ±3 cts.

CONTINUITY TESTS

Measurement Range:	0.01Ω to 39.99Ω
Test Current:	≥200mA from 0.01 to 20.00Ω
Accuracy:	3% rdg. ±4 cts.

GENERAL

Automatic DAR:	0.000 to 9.999
Automatic PI:	0.000 to 9.999
Automatic Capacitance:	0.005 to 4.999 μF
Programmable Run Time:	1 to 59 minutes
Display:	31-segment analog bargraph
Power Supply:	1050: 8 x 1.5V D cells; 1060: Rechargeable NiMH batteries
Dimensions:	9.45 x 7.28 x 4.33"
Weight:	7.5 lb

Model 1050



Model 1050



Features DataView™ Software:

- Configure all functions of the **Model 1060**
- Select test voltage and run tests from your computer with a simple click and execute process
- Retrieve and display data in real time
- Retrieve data from the instrument's memory (over 1500 insulation resistance and over 4000 resistance measurements)
- Display DAR and PI ratios
- Plot graphs of manual and timed tests
- Print reports of all test results
- Include your analysis as a journal entry with the report
- Store a library of set-ups for different applications
- Minimum System Requirements: Windows®95, Windows®98, Windows®NT or Windows®2000; 16MB of RAM ; 35MB of hard disk space; CD ROM drive
- Included with **Model 1060** Megohmmeter

Model	Description	Price
2130.01	1050 Megohmmeter w/ Bargraph	\$1666.00
2130.03	1060 Megohmmeter w/ Bargraph & Memory	\$2084.00

MEGOHMMETER



Features:

- Test voltage combinations: 250V, 500V or 1000V
- Insulation measurements to 4000MΩ
- Resistance measurements to 4000Ω
- Continuity test with beeper
- 600V test voltage range
- Large, easy-to-read digital display
- Data hold switch
- Test button may be locked on for hands-free operation
- Automatic discharge when test button is released
- Low battery indication
- Supplied with soft carrying case and leads

Specifications:

INSULATION TESTS

Test Voltage: 250V, 500V, 1000V
 Measurement Range: 0.1 to 4000MΩ
 Accuracy: ±3% rdg. +5 cts. <2MΩ
 ±5% rdg. +5 cts. <4MΩ

RESISTANCE TESTS

Measurement Range: 400 to 4000Ω
 Accuracy: ±1% rdg. + 5 cts.

CONTINUITY TESTS

Measurement Range: Displays & beeps <40Ω
 Accuracy: ±5% of reading

VOLTAGE TESTS

Measurement Range: 0 to 600V AC or DC
 Accuracy: **AC:** ±1% rdg +5 cts; **DC:** ±1% rdg +3 cts

Model	Description	Price
C-360	Megohmmeter	\$399.00

MEGOHMMETER

Features:

- Three constant test voltages: 250V, 500V, 1000V
- Constant test voltage across measurement range ensures accurate and realistic tests
- Autoranging on MΩ ranges
- Hand cranked operation: always ready for use independent of batteries or power sources
- Four terminals including guard and ground
- Designed for harsh environments: extra rugged cast aluminum case; O-ring sealed against water and dust



Specifications:

Test Voltages: 250V, 500V, 1000 VDC
 Megohm Ranges: **250V:** 1 to 11 MΩ, 11 to 500 MΩ;
500V: 1 to 11 MΩ, 11 to 500 MΩ;
1000V: 11 to 110 MΩ, 110 to 5000MΩ
 Accuracy: 2% of full scale
 Short Circuit Current: 5 mA (approx.)
 Test Voltage Range: 600V (safety check)
 Charging Time: **250V:** 0.2s/μF; **500V & 1000V:** 0.5s/μF
 Discharging Time: Automatic, 8s/μF
 Dielectric Test: 2000 VAC, 50/60 Hz, between (-), (+), (G) and ground terminals
 Ambient Conditions: -10° to 50°C; 0 to 80% RH
 Power Supply: Hand-cranked alternator with solid state voltage rectification and amplification
 Dimensions: 4.7 x 4.7 5.1" (120 x 120 x 130 mm)
 Weight: 3.3 lbs. (1.5 kg)

Model	Description	Price
1326.02	1250 Megohmmeter	\$1238.00

INSULATION RESISTANCE TESTER



Features:

- Taut band meter movement of drop-proof, internal core magnet type minimizes outside magnetic influence and assures trouble-free performance
- Linear scale reading
- Double rated
- Colour-coded, easy-to-read meter scale
- Equipped with TIMER switch that enables continuous measurements over 3 minutes

Specifications:

Rated Voltage/Resistance: 1000V / 2000M Ω , 500V / 1000M Ω
 Effective Measuring Range: 2 - 2000 M Ω , 1 - 1000 M Ω
 Terminal Voltage: Infinite Scale: $\pm 10\%$ of rated voltage
 Center Scale: $\pm 90\%$ of rated voltage
 Voltmeter: 0 - 600V
 Timer: Approx. 3 minutes
 Battery Check: BATT CHECK range of scale

Model	Description	Price
SK-3003	Insulation Tester	\$345.00

INSULATION RESISTANCE TESTER



Four functions in one unit.

The **Model 3313** performs the functions of three insulation testers with voltage ranges of 250V, 500V and 1000V respectively, plus a voltmeter. It permits a wide range of insulation resistance tests from low to high voltage circuits.

Engineered for maximum ease of operation. Illumination is provided to facilitate work at night or in dimly lit locations. Drip-proof construction protects the instrument against drops of water when it is in use. Push buttons permit the smooth operation of the instrument.

Specifications:

INSULATION RESISTANCE TESTER

Ranges: Rated Voltage: 250, 500, 1000V
 Rated Resistance: 50, 100, 2000 M Ω
 Effective Ranges: 0.05 - 50 M Ω ; 0.1-100 M Ω ;
 2-2000 M Ω
 Mid-Scale Values: 1; 2; 50 M Ω

Accuracy: Within $\pm 5\%$ of indicated value (at primary effective measuring ranges). Within $\pm 10\%$ of indicated value (at secondary effective measuring ranges)

AC VOLTMETER

Rated Voltage: 600V
 Accuracy: Within $\pm 3\%$ of full scale value
 Withstand Voltage: 2200V AC for one minute between electrical circuit and housing case

Model	Description	Price
3313	Insulation Tester	\$699.00

INSULATION RESISTANCE TESTERS



Features:

- Test the insulation of wires, cables, transformers and electrical motors
- Comes as a complete kit including test leads
- Selectable test voltages up to 1000V
- Programmable timer to perform Dielectric Absorption Ratio Test
- Sensitive ohmmeter for checking the resistance of motor windings
- Internal memory capable of storing 9 readings
- Built-in voltmeter (**AMB-35 only**)

Specifications:

Insulation Resistance:	0 to 4.000, 40.00, 400.0, 4000 MΩ
Accuracy:	±3% rdg. ± 5 LSD < 1GΩ; ±5% rdg. ± 5 LSD < 4GΩ
Resistance Range:	0 to 9999Ω
Accuracy:	±1% rdg. ± 2 LSD
MODEL AMB-35	
Low Resistance Range:	0.10 to 40.00Ω
Accuracy:	±2% rdg. ± 2 LSD
AC/DC Voltage Range:	0.1 to 1000.0V
Accuracy:	±2.0% rdg. ± 1 LSD

Model	Description	Price
AMB-25	Insulation Resistance Tester	\$507.00
AMB-35	Insulation Resistance Tester	\$710.00

INSULATION RESISTANCE TESTERS



Features:

- Megohm range(s)
- Sensitive ohm range
- Guard terminal
- Light and smooth operating crank
- Rugged cross-coil movement
- High-impact housing
- Spring loaded terminal connection
- Constant voltage generator

Model	Ranges	Test Voltage	Accuracy	Price
AMC-2	0-100MΩ	500VDC	±5% rdg.: .1 to 50MΩ; ±10% rdg.: all other points	\$1019.00
	0-200Ω	6VDC	±10% rdg.	
AMC-3	0-500MΩ	1000VDC	±5% rdg.: .5 to 200MΩ; ±10% rdg.: all other points	\$1250.00
	0-200Ω	6VDC	±10% rdg.	
AMC-4	0-100MΩ	500VDC	±5% rdg.: .1 to 50MΩ; ±10% rdg.: all other points	\$1643.00
	0-500MΩ	1000VDC	±5% rdg.: .1 to 100MΩ; ±10% rdg.: all other points	
	0-200Ω	6VDC	±10% rdg.	

INSULATION RESISTANCE TESTERS

Features:

- Insulation resistance measurement to 999M Ω
- Hand-free continuity measurement from 0.01 Ω to 99.9 Ω
- Produce rated test voltages into a 1mA load, ensuring that full test voltage is being applied to item under test
- Short-circuit current of at least 200mA and an open-circuit voltage of 5V
- Automatic discharge of item under test
- Battery-powered

MODELS BM121 & BM122

- 500 or 1000 VDC test voltages
- Warns of voltages > 25V AC/DC
- Built to IEC1010-1 safety standards



Features:

MODELS BM221, BM222 & BM223

- Test voltages from 250 to 1000VDC
- Default voltmeter indicates magnitude of external voltage 25 to 600V AC or DC
- Continuity buzzer aids in circuit tracing
- Lead resistance up to 9.99 Ω may be nulled
- Analog bargraph
- Backlit display
- Conforms to IEC1010-1 (1992), EN61010-1 (1993) Cat. III; 300V phase to earth, 440V phase to phase



Model	BM121	BM122	BM221	BM222	BM223
Test Voltage	500VDC	1000VDC	500VDC	500, 1000VDC	250, 500, 100VDC
Insulation Resistance	0.01 to 999M Ω	0.01 to 999M Ω	0.01 to 999M Ω	0.01 to 999M Ω	0.01 to 999M Ω
Accuracy (<100M Ω)	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.
Continuity Range	0.01 to 9.99 Ω ; 10 to 99.9 Ω	0.01 to 9.99 Ω ; 10 to 99.9 Ω	0.01 to 9.99 Ω ; 10 to 99.9 Ω	0.01 to 9.99 Ω ; 10 to 99.9 Ω	0.01 to 9.99 Ω ; 10 to 99.9 Ω
Accuracy	$\leq 5\%$ rdg. ± 2 dgt	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.	$\leq 5\%$ rdg. ± 2 dgt.
Power Supply	6 1.5V AA alkaline	6 1.5V AA alkaline	6 1.5V AA alkaline	6 1.5V AA alkaline	6 1.5V AA alkaline
Dimensions	7 x 3 x 1" (HWD) (195 x 98 x 40mm)	7 x 3 x 1" (HWD) (195 x 98 x 40mm)	7 x 3 x 1" (HWD) (195 x 98 x 40mm)	7 x 3 x 1" (HWD) (195 x 98 x 40mm)	7 x 3 x 1" (HWD) (195 x 98 x 40mm)
Weight:	1.3 lb (530g)	1.3 lb (530g)	1.3 lb (530g)	1.3 lb (530g)	1.3 lb (530g)
Price	\$390.00	\$430.00	\$620.00	\$720.00	\$760.00

INSULATION RESISTANCE TESTERS

Model BM80/2

In addition to their exceptional insulation testing capabilities, this model offers excellent multimeter capabilities. It features AVO's patented digital/logarithmic arc analog display for enhanced measurement sensitivity. This instrument also features live circuit warning that automatically displays voltage above 25V with audible alarm and inhibit circuit to prevent testing on live circuits above 55V (25V on all DMM ranges, except volts). The **BM80/2** is the top-of-the-line model, with a total of five test voltages (50V - 1000V) and added resistance range. It can measure continuously from 0.01 Ω to 200G Ω .



Model WM6

WM6 is the most basic model in the line, with hand-crank operation, analog movement, and single test voltage. This compact, lightweight instrument provides insulation resistance and continuity measurements without dependence on batteries or external power source.



Model	Test Voltage	Insulation Resistance	Resistance Range	Display	Power Source	Price
BM80/2	50 Vdc 100 Vdc 250 Vdc 500 Vdc 1000 Vdc	0-10 G Ω 0-20 G Ω 0-50 G Ω 0-100 G Ω 0-200 G Ω	.1 k Ω -100 k Ω digital 0-10 M Ω analog	Analog/ Digital	Battery	\$1490.00
WM6	500 Vdc	0-200 M Ω	0-100 Ω	Analog	Hand-cranked	\$890.00

INSULATION & CONTINUITY TESTERS

Model	MIT300	MIT310	MIT320	MIT310A
Insulation Testing				
250Vdc	•	•	•	•
500Vdc	•	•	•	•
1000Vdc		•	•	•
Test Range	999MΩ	999MΩ	999MΩ	999MΩ
Limit Alarm			•	
Continuity Testing				
Continuity to 100Ω	•	•	•	•
Continuity buzzer	•	•	•	•
Lead null to 9Ω	•	•	•	2Ω
Adjustable buzzer			•	
Buzzer disable			•	
Voltage Measurement				
AC/DC Volts		600V	600V	600V
Resistance Measurement				
10Ω to 1MΩ Range			•	
Other Features				
Voltage warning	•			
Default voltmeter		•	•	•
Backlit display			•	
Locking test button	•	•	•	•
Auto power down	•	•	•	
Switched test probe			•	
IP54 weatherproof	•	•	•	•



Model	Description	Price
MIT300	Insulation Tester, 250/500V	\$550.00
MIT310	Insulation Tester, 250/500/1000V	\$650.00
MIT310A	Analog Insulation Tester, 250/500/1000V	\$650.00
MIT320	Insulation Tester, 250/500/1000V	\$750.00

INSULATION RESISTANCE TESTERS

Features:

- Test voltages from 250 to 1000 VDC
- Insulation resistance measurement to 10GΩ (10,000MΩ)
- **SP1** FastTest Probe allows the instrument to be remotely operated
- Easy and fast true voltage indication, without the need for a separate multimeter
- Automatic detection of live circuits
- Automatically discharges after test
- Insulation tests at 1mA into rated load
- Continuity tests at 200mA short circuit current
- Locking test button enables dielectric absorption and polarization index testing
- Simultaneous analog and digital displays for maximum information
- Dust and moisture protected to IP54 for maximum safety in harsh working environments
- Designed to IEC 1010-1 safety standards



Specifications:

INSULATION RESISTANCE TESTS

Test Voltages: **BM400/2:** 500/1000 VDC;
BM401/2: 500 VDC;
BM403/2: 250/500/1000 VDC

Measurement Range: 0.01 to 999 MΩ digital;
0.1 to 10 GΩ analog

Accuracy: ±2% of reading ± 2 digits

Short Circuit Current: 1.5 mA ±0.5 mA

RESISTANCE TESTS

Measurement Range: 0.01 to 99.9 kΩ digital;
0 to 10 MΩ analog

Accuracy: ±5% of reading ± 2 digits

Short Circuit Current: 10 μA ±5 μA

RESISTANCE TESTS

Measurement Range: 0.01 to 99.9Ω digital; 0 to 50Ω analog
1 to 9.99Ω: ±2% rdg. ±2 dgt.;
10 to 99.9Ω: ±5% rdg.

Short Circuit Current: 205 mA ±5 mA

Open Circuit Voltage: 5V ±1V

Continuity Buzzer: Operates at less than 5Ω

Voltage Range: 0 to 600VDC, 0 to 600VAC (50/60 Hz)
0 to 450 VAC (400 Hz)

GENERAL

Power Supply: 6 x 1.5V AA alkaline batteries

Dimensions/Weight: 2.5 x 4 x 9" HWD/1.5 lb.

Model	Description	Price
BM400/2	Insulation Resistance Tester, 500/1000V	\$860.00
BM401/2	Insulation Resistance Tester, 500V	\$820.00
BM403/2	Insulation Resistance Tester, 250/500/1000V	\$890.00

GROUND RESISTANCE TESTERS

Features:

- Simple and fast clamp-on operation - no leads, no auxiliary rods or spacing requirements
- Direct reading of ground resistance from 0.01Ω to 1200Ω
- Direct reading of continuity and ground loop resistance
- Direct reading of ground leakage current from 1 mA to 30 Arms
- New jaw design with large 32mm (1.25") window accommodates up to 1000 MCM cables
- Inner jaw composed of two independent and individually shielded magnetic cores permitting injection of a test signal and accurate return signal measurement without noise interference or cross talk common to separate probe instruments
- Alarm function with adjustable set point and buzzer for quick field checks (**3731 only**)
- Memory function to store 99 field measurements for later retrieval and analysis (**3731 only**)
- Self test at start-up and auto-off for power management
- Alarm settings and stored memory information saved during shutdown
- Rugged Lexan® head and body construction meets or exceeds IEC standards for drop test, shock and vibration test, weather-proofing against water projections or dust, etc.



Specifications:

Ground Resistance			
Measurement	Range	Resolution	Accuracy*
Autoranging 0.01/1200 Ω	0.10/1.0 Ω	0.01 Ω	±(2% + 0.2Ω)
	1.0/50.0 Ω	0.1 Ω	±(1.5% + 0.1Ω)
	50.0/100.0 Ω	0.5 Ω	±(2.0% + 0.5Ω)
	100/200 Ω	1 Ω	±(3.0% + 1Ω)
	200/400 Ω	5 Ω	±(6.0% + 5Ω)
	400/600 Ω	10 Ω	±(10% + 10Ω)
600/1200 Ω	50 Ω	n/a	
Ground or Leakage Current			
Autoranging 1 mA/30.00 Arms	1/300mA	1 mA	±(2.5% + 2mA)
	0.300/3.000 A	0.001 A	±(2.5% + 2mA)
	3.00/30.00 A	0.01 A	±(2.5% + 20mA)

ELECTRICAL

Resistance Frequency: 1.689 kHz 2403Hz
 Current Frequency: 47 to 800 Hz
 Current Overload: O/L displayed above 30 Arms
 Maximum Overload: 100A continuous, 200A (<5s) 50/60 Hz

MECHANICAL

Display: 3 3/4 digit LCD, 1.73 x 1.10"
 (44 x 28mm)
 Power Supply: 9V alkaline battery
 Battery Life: 8 hours typical or approx. 1000 measurements of 30 seconds
 Jaw Window Diameter: 1.25" (32 mm)
 Jaw Opening: 1.38" (35 mm)
 Dimensions: 9.25 x 3.94 x 2.17" (235 x 100 x 55 mm)
 Weight: 2.2 lbs. (1 kg)

Model	Description	Price
2117.60	3711 Clamp-on Ground Resistance Tester	\$2781.00
2117.61	3731 Clamp-on Ground Resistance Tester w/ Alarm & Memory Function	\$3059.00

EARTH RESISTANCE CLAMP

Features:

- Resolution of 0.001Ω for low resistance measurements
- Accuracy of ± 0.01Ω
- Stores up to 99 resistance measurements
- Limit alarm
- User selectable alarm threshold from 1 to 100Ω
- Measures leakage current to 1mA and neutral current to 20A
- 1 sec. sampling time
- 3-3/4 digit LCD
- Display "Hold"
- Auto-ranging
- Doubly insulated conductor clamp for extra security
- Large jaws open to 45 x 32mm



Specifications:

	Range	Accuracy	Resolution
Resistance:	0.01-0.999Ω	±(1.5% + 0.01Ω)	0.001Ω
	1-9.99Ω	±(1.5% + 0.01Ω)	0.01Ω
	10-99.9Ω	±(2.0% + 0.3Ω)	0.1Ω
	100-199.9Ω	±(3.0% + 1Ω)	1Ω
	200-400Ω	±(6.0% + 5Ω)	5Ω
	400-600Ω	±(10% + 10Ω)	10Ω
	600-1200Ω	±(20% + 20Ω)	20Ω
Current:	100mA	±(2.5% + 1mA)	0.1mA
	300mA	±(2.5% + 2mA)	0.3mA
	1A	±(2.5% + 0.003A)	0.001A
	3A	±(2.5% + 0.01A)	0.003A
	10A	±(2.5% + 0.03A)	0.01A
	20A	±(2.5% + 0.05A)	0.03A
Max. Test Voltage:	3700V		
Overload Protection:	20A rms		
Display:	4-digit LCD, 9999 counts		
Power Supply:	6 x Ni-Mh AAA batteries 1.2V		
Battery Life:	10 to 12 hours of continuous use		
Dimensions:	54 x 104 x 276mm		
Weight:	1050g, including batteries		

Model	Description	Price
MS2301	Earth Resistance Clamp	\$1395.00

GROUND RESISTANCE TESTERS

Features:

- Measures ground resistance from $.025\Omega$ to 1550Ω
- Measures ground leakage current from 0.2mA to 35A
- Induces a test current into the system without disturbing existing connections
- True RMS current measurement facility to allow measurement of earth currents
- Automatic self calibration
- Auto ranging
- Auto power off (configurable)
- Configurable high and low alarms with audible indication
- Indication of high noise content that may affect readings
- On-board storage of test results
- Hold function
- Over current protected
- Accommodates conductors up to $1.37''$ (35mm) in diameter
- Warning of open jaws ensures accuracy
- RS232 interface (*DET20C only*)
- Complete with heavy duty carrying case, multi-value resistance calibration check loop, download cable and Download Manager driver (*DET20C only*)

Specifications:

Ground Resistance Range:	0.025Ω to 1500Ω
Ground Current Range:	0.2mA to 100mA
Leakage Current Range:	0.2A to 35A
High Alarm Setpoint:	0 to 1500Ω to 1Ω resolution
Low Alarm Setpoint:	0 to 1500Ω to 1Ω resolution
Data Logging Capacity:	<i>DET10C</i> : 116 records; <i>DET20C</i> : 8180 records
Data Logging Interval:	Manual, 1 to 255 seconds



Model	Description	Price
DET10C	Ground Resistance Tester	\$2250.00
DET20C	Ground Resistance Tester	\$2550.00

GROUND RESISTANCE & RESISTIVITY TESTER

Features:

- Measures earth ground resistance - 3-point (fall of potential) or 2-point tests
- Automatically calculates resistivity - 4-point test
- Automatic voltage measurement prevents false measurements
- Automatically applies three testing frequencies for the most accurate readings
- Auto ranging
- 999 internal memory locations to store measurements
- Test leads, auxiliary electrodes and software are included
- RS-232 interface
- Cat. III 250V safety rating

Specifications:

GROUND RESISTANCE

Range:	0 to 19.99 , 199.9 , 1999Ω
Accuracy:	$\pm 2\%$ rdg. + 3 LSD

GROUND RESISTIVITY

Range:	0.6 to 125.6Ω , 0.125 to 1.256 , 19.99 , $199.9\text{k}\Omega$
Accuracy:	$\pm 2\%$ rdg. + 3 LSD

AC VOLTAGE

Range:	0 to 500.0V
Accuracy:	$\pm 2\%$ rdg. + 2 LSD



Model	Description	Price
GP-2	Ground Resistance & Resistivity Tester	\$4457.00

GROUND RESISTANCE TESTERS



Features:

- Autoranging, automatically selects optimum range
- Fall-of-potential method
- All models measure ground resistance (2- & 3-point)
- Simple to operate...connect, press and read
- **Model 4610** also measures soil resistivity (4-point)
- Step voltage tests and touch potential measurements
- Designed to reject high levels of noise and interference
- Large, easy to read LCD indicates battery status, overrange and test lead shorts and lead reversals
- Warning LEDs on faceplate indicate high input noise, high auxiliary rod resistance and fault connections
- Battery powered for convenient use in remote field applications
- Heavy duty ABS case is O-ring sealed against dust and water
- Mechanical and safety specifications meet or exceed IEC standards to ensure safe and reliable field use
- Colour-coded terminals and lead identification
- Kits include 2 or 4 T-shaped ground rods, a 16-ft. lead, 2 leads of other lengths (150' or 300') on reels with wind-up handles to facilitate storage, and batteries in a hard carrying case

Specifications:

RANGES	20Ω	200Ω	2000Ω
Resolution	10 mΩ	100 mΩ	1Ω
Test Current	10 mA	1 mA	0.1 mA
Accuracy	2% rdg ±1 ct	2% rdg ±1 ct	3% rdg ±3 cts
AUXILIARY ELECTRODE RESISTANCE			
Current Circuit	30 kΩ	30 kΩ	50 kΩ
Voltage Circuit	50 kΩ	50 kΩ	50 kΩ

Open Voltage:	< 42V peak
Operating Frequency:	128 Hz square wave
Voltage Withstand:	250 VAC w/ spikes of 3000 VAC or 1000 VDC
Response Time:	4-8 seconds for a stabilized measurement
Interference:	Rejects high levels of interference voltage (DC, 50 to 60 Hz, harmonics) DC voltage in series w/ X: 20V AC voltage in series w/ Y: 13V peak AC voltage in series w/ Z: 32V peak
Dielectric Test:	3kV, 50/60 Hz, 1 min.
Fuse:	High breaking capacity 250V, 0.1A, 0.25 x 1.25"
Connection:	Terminals accept spade lugs w/ min. gap of 6mm or standard 4mm banana jacks
Display:	7 segment LCD, .71" (18mm) high 3-1/2 digit; 2000 count LCD w/ indicators for overrange, test lead shorts & lead reversals
Power Supply:	8 x 1.5V "AAA" alkaline batteries
Battery Life:	1800, 15-sec. measurements
Ambient Conditions:	Operating 14 to 131°F (-10 to 55°C), 0 to 90% RH
Dimensions:	8.7 x 5.4 x 5.9" (220 x 136 x 150 mm)
Weight:	2.9 lb (1.3 kg) approx.

Model	Description	Price
2114.91	3620KIT 3-pt Analog Ground Resistance Tester	\$1387.00
2114.93	3640KIT 3-pt Digital Ground Resistance Tester	\$1499.00
2114.95	4610KIT 4-pt Digital Ground Resistance Tester	\$2223.00

EARTH RESISTANCE TESTER

Features:

- Earth resistance values can be read directly from the scale
- Measurement made easy by pressing "Simplified Measure" button
- No need to use a shorting wire as terminals P and C can be internally shorted
- Low power consumption, only 12V/100mA max.
- Includes one set of colour-coded test leads, one set of auxiliary earth spikes, batteries, carrying case and instruction manual



Specifications:

MEASUREMENT RANGES	
Earth Resistance:	10, 100, 1000Ω
Earth Voltage:	0 to 30VAC (40/500Hz)
ACCURACY	
Earth Resistance:	±3% of full scale
Earth Voltage:	±3% of full scale
MEASUREMENT SYSTEM	
Earth Resistance:	Constant current inverter, 800Hz, 2mA
Earth Voltage:	Rectifier type 5kΩ/V, 40/500Hz
GENERAL	
Withstand Voltage:	1500VAC for 1 minute
Power Supply:	8 x 1.5V "AA" batteries
Dimensions:	140 x 140 x 90mm
Weight:	800g

Model	Description	Price
4102A-H	Earth Resistance Tester	\$545.00

GROUND RESISTANCE TESTERS

Model 4630



Features:

- Measures soil resistivity (4-point) method
- Measures ground resistance (2- and 3-point) fall-of-potential method
- Step voltage tests and touch potential measurements
- Auto-ranging: automatically selects the optimum range
- Designed to reject high levels of noise and interference
- Extremely simple to operate: connect, press, read
- LEDs on faceplate informs operator of high input noise, high auxiliary rod resistance and fault connections
- Large, easy-to-read backlit display
- Colour-coded terminals
- Rugged, dustproof and rainproof field case
- Battery powered (**Model 4620**)
- AC powered with rechargeable NiMH batteries (**Model 4630**)
- Kits include meter, two 300-ft. colour-coded leads on spools, two 100-ft. colour-coded leads, four 16" auxiliary ground electrodes, one 16-ft. lead with Mueller® clip, carrying bag, one 100-ft. tape measure, one AC power cord, ground workbook and user manual

Model 2130.46



Specifications:

RANGES	20Ω	200Ω	2000Ω
Measurement	0.00 to 19.99Ω	20.0 to 199.9Ω	200 to 1999Ω
Resolution	10mΩ	100 mΩ	1Ω
RESISTANCE MEASUREMENT			
Current	10mA	1mA	0.1mA
Accuracy	2% rdg ± 1 ct	2% rdg ± 1 ct	3% rdg ± 3 cts
AUXILIARY ELECTRODE INFLUENCE			
Current Circuit	200Ω	30kΩ	50kΩ
Voltage Circuit	2000Ω	50kΩ	50kΩ

Open Voltage:	< 42V peak
Operating Frequency:	128 Hz square wave
Voltage Withstand:	250 VAC w/ spikes of 3000VAC or 1000VDC
Response Time:	6 seconds for a stabilized measurement
Fuse Protection:	0.1A, 250V, 0.25 x 1.25", 30kA interrupt capacity
Power Supply:	4620: 8 x C-cell alkaline batteries; 4630: 120V/230V, 50/60Hz rechargeable 9.6V, 3.5Ah NiMH batteries
Battery Life:	1800, 15-sec. measurements

Model	Description	Price
2130.43	4620 Ground Resistance Tester	\$1666.00
2130.44	4630 Ground Resistance Tester	\$1945.00
2130.45	4620 Ground Resistance Tester Kit	\$2628.00
2130.46	4630 Ground Resistance Tester Kit	\$2921.00
2130.60	Tape Measure, 100 ft.	\$52.00
2130.61	3-Point Ground Test Kit, includes carrying bag, two 100-ft. colour-coded leads, one 16-ft. lead & two 16" auxiliary ground electrodes	\$320.00
2130.62	3-Point Test Kit, includes carrying bag, two 150-ft. colour-coded leads on spools, two 16" auxiliary ground electrodes, one 16-ft. lead w/ Mueller® clip & one 100-ft. tape measure	\$923.00
2130.63	4-Point Test Kit, includes carrying bag, two 300-ft. colour-coded leads on spools, two 100-ft colour-coded leads, four 16" auxiliary ground electrodes, one 16-ft. lead w/ Mueller® clip & one 100-ft. tape measure	\$1243.00

MULTIMETER/OSCILLOSCOPE

The compact **ScopeMeter 123** is the rugged solution for industrial troubleshooting and installation applications. It's a truly integrated test tool, with oscilloscope, multimeter and "paperless" recorder in one affordable, easy-to-use instrument. Find fast answers to problems in machinery, instrumentation, control and power systems.

Features:

- A dual-input 20 MHz digital oscilloscope
- Two 5,000 count True-rms digital multimeters
- A dual-input TrendPlot™ recorder
- Connect-and-View™ trigger simplicity for hands-off operation
- Shielded test leads for oscilloscope, resistance and continuity measurements
- Up to five hours battery operation
- 600V CAT III safety certified
- Optically isolated RS-232 interface
- Rugged compact case

A three-in-one tool

ScopeMeter 123 combines a 20 MHz dual input digital storage oscilloscope, two True-rms digital multimeters and a dual input TrendPlot™ recorder all in a compact, battery powered instrument. Leave all your other test tools behind because the **ScopeMeter 123** is the only one you'll need.

One test lead measures all

High frequency waveform, meter, capacitance and resistance measurements and continuity checks are all covered by the shielded test leads. No time wasted finding or swapping leads.

Battery powered mobility

Five hours of battery operation frees you from mains outlets for true on-the-move working. Its handheld format (weighing just 2.5 lbs) is easy to carry, and it fits comfortably in your hand. The rugged and drip proof case assures long life and reliable operation in the harshest industrial environments.

Safety certified

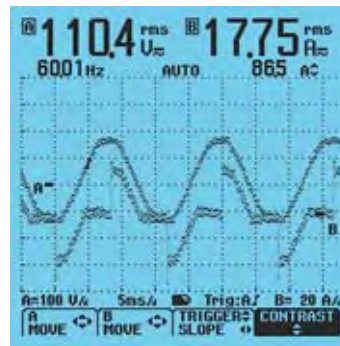
The **ScopeMeter 123** and the included shielded test leads are safety certified for measurements on 600V CAT III industrial power systems. Via the optically isolated RS-232 interface, the **ScopeMeter 123** can be safely connected to a printer for direct print out or a PC for later analysis and documentation with FlukeView software.

Specifications:

Bandwidth:	20 MHz or 40 MHz
R.T. Sample Rate:	25 MS/s
Inputs & Digitizers:	2
Independently Floating Isolated Inputs:	Up to 1000 V between inputs, references and ground
Input Sensitivity:	5mV-500V/div
Max. Record Length:	512 min/max points per input
Glitch Capture:	40 nsec
Scope Measurements:	26 automatic
True RMS Multimeter:	5,000 count, dual input
Power Supply:	Adapter/battery charger included
Battery Life:	5 hours on NiCd batteries
Dimensions:	232 x 115 x 50mm (2 x 4.5 x 9.1")
Weight:	1.2 kg (2.5 lbs)
Safety Certified:	(EN61010-1) 600V CAT III



LISTED



Dual-input measurement shows both meter reading and waveform at the same time



You can use the ScopeMeter 123 to check capacitance of a starting capacitor for a single phase motor

Model	Description	Price
123/003	Industrial Scopemeter, 20MHz	\$1858.00
124/003	Industrial Scopemeter, 40MHz	\$2317.00
SCC120E	Software English & Cable Carrying Case	\$480.00
SCC120F	Software French & Cable Carrying Case	\$480.00
STL120	Shielded Test Leads	\$163.00
BB120	Shielded Banana to BNC Adapter	\$41.00
C120	Hard-shell Carrying Case	\$93.00
C125	Soft Case w/ belt loop	\$46.00
ITP120	External Trigger Probe	\$349.00
AC120	Alligator Clips	\$33.00
HC120	Hook Clips	\$48.00
BP120	Spare Battery Pack	\$73.00
DP120	20 MHz Differential Probe	\$697.00
PAC91	Printer Adapter Cable	\$330.00
SW90W/034EFG	FlukeView V3.0 CD-ROM	\$325.00

SCOPEMETER ACCESSORIES

Cable and Adapters

PAC91 Printer Adapter Cable

- Safety designed optical to parallel printer adapter cable
- 0.25m

Price: \$330.00



PM9080/101 RS-232 Interface Adapter

- Optically isolated

Price: \$236.00



PM9081/001 Dual Banana Plug to BNC Adapter

- 4mm male banana plug to female BNC

- Set consists of two adapters

Price: \$44.00



PM9082/001 Dual Banana Jack to BNC Adapter

- 4mm male banana jack to female BNC

- Set consists of two adapters

Price: \$44.00



PM9091/001 Coaxial BNC Cable Set

- Three coloured BNC male connectors (red, grey and black) for easy identification
- 50Ω, 3 x 1.5m

Price: \$110.00



PM9092/001 Coaxial BNC Cable Set

- Three coloured BNC male connectors (red, grey and black) for easy identification
- 50Ω, 3 x 0.5m

Price: \$94.00



PM9093/001 Single to Dual BNC Adapter

- Male BNC to dual female BNC T-piece

- Set consists of two adapters

Price: \$63.00



BB120 Banana-to-BNC Adapter

- Adapting probes and BNC adapters to 120 Series test tools

- Two shielded banana-to-BNC adapters

Price: \$41.00



Trigger and Differential Probes

DP120 Differential Probe

- 1.5m with shrouded banana probe tips (red and black)
- Cat. III 600V, Cat. II 1000V rated

Price: \$697.00



IPT120 Optically Isolated Trigger Probe

- 1.2m for ScopeMeter 123
- Included hookclip with ground lead
- Max. signal voltage and voltage to ground: 600V rms, Cat. II

Price: \$349.00



Software, Carrying Cases and Kits

SCC120 Software Cable Case for 120 Series

SCC190 Software Cable Case for 190 Series

Accessories package includes

- FlukeView® ScopeMeter® software for Windows® English, French and German

- PM9080 Optically isolated RS-232 adapter/cable

- C120 or C190 Hard carrying case

Model SCC120 Price: \$480.00

Model SCC190 Price: \$643.00



C120 Hard Carrying Case for 120 Series

C190 Hard Carrying Case for 190 Series

- Storage compartments for test leads, probes, instruction manual, power adapter and other small accessories

Model C120 Price: \$93.00

Model C190 Price:

\$217.00



C125 Compact Soft Case

- Zippered carrying case for 120 Series

- Pouch is designed to carry test leads and probes

- Convenient belt loop accommodates tool belt

Price: \$46.00



C195 Soft Carrying Case

- Durable soft case
- Adjustable storage compartments suitable for all ScopeMeter models

- Storage compartments for test leads, probes, instruction manual, power adapter and other accessories

Price: \$192.00



SCOPEMETERS

Features:

- Dual-input - 60, 100 or 200 MHz bandwidth
- Up to 2.5 GS/s real-time sampling per input
- Connect-and-View™ automatic triggering, a full range of manual trigger modes plus external triggering
- 27,500 points per input record length using ScopeRecord mode
- Automatic capture and replay of 100 screens
- 24 automatic waveform measurements
- Cursors, zoom and real-time clock
- Four hours rechargeable NiMH battery pack
- 1000V CAT II and 600V CAT III safety certified
- Up to 1000V independently floating isolated inputs
- Includes a 5,000 counts True-rms multimeter and a TrendPlot™ paperless recorder



In addition to the impressive capabilities of the **190 Series**, the new colour models offer:

- Colour for easy identification of individual waveforms
- Full-size, high resolution screen for revealing more signal detail
- Digital Persistence for analyzing complex dynamic waveforms
- Fast display update rate for seeing dynamic behavior instantaneously
- Sop-on-Trigger (in ScopeRecord mode) for storing and analyzing pre-trigger waveform data
- Waveform reference for visual comparisons
- V_{pwm} function for motor drive and frequency inverter applications

A choice of bandwidth

The **ScopeMeter 190 Series** offers up to 200 MHz bandwidth for capturing high frequency signals found in today's state-of-the-art electronics. For less demanding applications, there are also 100 MHz and 60 MHz models. You still get the same advanced functionality without paying for bandwidth you don't need.



See what's really happening

With a maximum real-time sampling rate of 2.5 GS/s per input, you can see what really happens with 400 ps resolution. Both inputs have their own digitizer, so you can simultaneously acquire two waveforms and analyze them with the highest resolution and detail. If an anomaly flashes by on the screen, just press the Replay button to see it again.

Deep memory for high-resolution ScopeRecord™

The memory stores 27,500 points per input for high resolution recording of events up to 30 hours, and still captures fast intermittents and glitches as short as 50 ns. This continuous roll mode also stores events like motion profiles, UPS-, power supply- and motor start-ups. And with 100 x zoom, you can look at the smallest details, like individual power cycles. Two of these 27,500 point recordings can be stored for later analysis.

Advanced trigger modes

A wide choice of automatic and manual trigger modes gives you the flexibility to capture just about any signal you'll encounter. Connect-and-View triggering is ideal for fast and easy checking of multiple test-points. The manual modes include time delay, video and pulse-width triggering. A fully isolated external trigger input is included for troubleshooting time relationships between two input signals synchronized to a third signal.

Analysis power

For analysis of waveforms, ScopeRecord and TrendPlot recordings the ScopeMeter 190 features 24 automatic measurements, cursors, zoom and real-time clock. The analysis can be made directly or later when back in the office. Up to 2 recordings and 10 scope screens can be stored for analysis, print-out or download to a PC.

SCOPEMETERS

Model	199C	196C	199B	196B	192B
Bandwidth	200 MHz	100 MHz	200 MHz	100 MHz	60 MHz
Display	144mm full colour LCD		130mm monochrome LCD		
Persistence	Digital, giving analog oscilloscope-like waveform decay		On/Off		
Max. Record Length	1200 points per input		1000 points per input		
... in Scope Mode	27,500 points per input		27,500 points per input		
... in Scope Record Mode	(2 min/div to 5 ms/div)		(2 min/div to 10 ms/div)		
Number of Inputs	2 plus external/DMM input, all isolated from each other and ground				
Number of Digitizers	2				
Independently Floating Inputs	Up to 1000V between inputs, references and ground				
Input Sensitivity	5 mV/div to 100 V/div				
Glitch Capture	Up to 3 ns when using Pulse Width triggering, 50 ns peak detect at 5 µs/div to 1 min/div				
Trigger Types	Connect-and-View, Free Run, Single Shot, Edge, Delay, Video, Video line, Selectable pulse width and External				
Timebase Range	5 ns/div to 2 min/div				10 ns/div to 2 min/div
Scope Measurements	7 cursor measurements, 30 automatic measurements		7 cursor measurements, 28 automatic measurements		
ScopeRecord Trigger Modes	Start on Trigger, Stop on Trigger		Start on Trigger		
Capture Last 100 Screens	Automatic, with Replay capability				
Dual Input TrendPlot	Yes, with Cursors and Zoom				
Memory	10 screens and set-ups				
... for Screen/Set-ups	Two, each can store 100 scope screens, a ScopeRecord or a TrendPlot				
... for Recordings	5000 counts, Volts, Amps, Ohms, Continuity, Diode, Temperature				
True-RMS Multimeter	EN61010-1 1000V Cat II/600V Cat III				
Safety Certifications	4 hr. NiMH battery installed; Adapter/battery charger included				
Power Supply	256 x 169 x 64 mm (10.1 x 6.6 x 2.5")/1.2 kg (2.5 lb)				
Dimensions/Weight					

Accessories:

INCLUDED ACCESSORIES

Fluke ScopeMeter test tools come standard with a complete accessory package including line voltage adapter, and battery pack (installed). ScopeMeter 190 Series come with probes, probe accessories and multimeter test leads.

SCC kit includes: Hard-shell carrying case, optically isolated RS-232 interface cable, and FlukeView® for Windows® software. (Transfer screens, waveform data and setups to a PC for documentation and analysis)

OPTIONAL ACCESSORIES

Accessory cases, batteries, test leads and probes, interface cables and FlukeView software available.

Model	Description	Price
192B/633	192 ScopeMeter 60 MHz, 500 MS/s	\$3098.00
196B/633	196 ScopeMeter 100 MHz, 1 GS/s	\$3635.00
199B/633	199 Scopemeter 200 MHz, 2.5 GS/s	\$4183.00
196C/633	196 ScopeMeter 100 MHz, 1 GS/s, Colour	\$4183.00
199C/633	199 ScopeMeter 200 MHz, 2.5 GS/s, Colour	\$4648.00
C190	Hard Carrying Case	\$217.00
C195	Soft Carrying Case	\$192.00
CS20MA	4-20mA Current Shunt	\$85.00
PAC91	Printer Adapter Cable	\$330.00
PM9080/101	Optically Isolated RS-232 Interface Adapter	\$236.00
RS190	Replacement Probe Set	\$64.00
SCC190EFG	FlukeView® Software for Windows®, PM9080 interface adapter/cable & C190 hard case	\$643.00
SW90W/034EFG	FlukeView™ Software for Windows™	\$325.00
VPS200-R	10:1 Voltage Probe (red)	\$239.00
VPS200-G	10:1 Voltage Probe (grey)	\$239.00
AS190-R	Industrial Probe Accessory Set for VP190-R Probe (includes 2 industrial alligator clips, 2 ground leads & 2 test probes)	\$48.00
AS190-G	Industrial Probe Accessory Set for VP190-G Probe (includes 2 industrial alligator clips, 2 ground leads & 2 test probes)	\$48.00

OSCILLOSCOPE

Features:

DIGITAL MULTIMETER

- 3-3/4 digit display (3999 counts)
- Auto range
- True RMS AC measurements
- VAC/DC, AAC/DC, diode, continuity, resistance
- Analog bar graph
- REL, Max/Min, dBm

DIGITAL STORAGE OSCILLOSCOPE

- DC to 20MHz, 2 channels
- Vertical Sensitivity: 5mV/div - 2V/div (1-2-5 step, 9 ranges)
- Horizontal Sweep Mode: 50ns/div - 2s/div
- Vertical Mode: CH1, CH2, dual, Add, Sub, X-Y
- Cursor: ΔV , ΔT , $1/\Delta T$
- Auto setup
- Save/Load

FREQUENCY COUNTER

- 5Hz to 20 MHz, 2 channels
- 5-digit resolution
- Frequency, Period
- Auto/manual range

LOGIC ANALYZER

- 20MS/s, 8 channels
- Horizontal Sweep: 1 μ s/div - 2s/div
- Threshold Level: 1.4V (TTL)
- Trigger Pattern: 0, 1, X
- Display Mode: Timing, State
- Cursor: ΔV , ΔT , $1/\Delta T$

Specifications:

DIGITAL STORAGE OSCILLOSCOPE

Vertical

Input Channels:	CH1, CH2
Sensitivity:	5mV/div - 2V/div (1-2-5 step, 9 ranges)
Frequency Bandwidth:	DC to 20MHz
Rise Time:	< 17.5ns
Input Coupling:	AC, DC, GND
Input R/C:	1M Ω \pm 2%/28 pF \pm 5 pF
Input Damage:	250Vpp max.
Modes:	CH1, CH2, ADD, DUAL, SUB, X-Y

Horizontal

Sweep Time:	Equivalent Mode: 50 ns/div to 5 μ s/div; One Shot Mode: 1 μ s/div to 0.1 s/div; Roll Mode: 0.2 s/div to 2 s/div
Sweep Mode:	Auto, Normal, Single
X-Y Phase:	Less than 3° at 1MHz; 0 - 96 div (one shot), 0 - 12 div (equiv., roll modes)

Trigger Mode

Source:	CH1, CH2
Coupling:	AC, DC, HF-RJ
Slope:	Rising, Falling
Resolution:	256 points (8 bits)
Sensitivity:	Equivalent: 1.5 div; One Shot: 1 div;
Position:	0 to 12th/div



A/D Converter

Resolution:	8 bits (256 resolution)
Sampling Period:	20MS/s (50ns period)
Calibration Signal	
Waveform:	Squarewave
Output Frequency:	1kHz \pm 10%
Voltage:	3V \pm 5%
Probe Type:	X1, X10

DIGITAL MULTIMETER

DC Voltage Range:	400mV to 600V
Accuracy:	\pm 0.5% rdg. + 3 dgts.
AC Voltage Range:	400mV to 600V
Accuracy:	\pm 2.5% rdg. + 8 dgts. (400Hz-5kHz)
DC Current Range:	400 μ A to 400mA
Accuracy:	\pm 1.0% rdg. + 2 dgts.
AC Current Range:	400 μ A to 400mA
Accuracy:	\pm 1.8% rdg. + 10 dgts. (400Hz-10kHz)
Resistance Range:	400 Ω to 40M Ω
Accuracy:	\pm 1.0% rdg. + 4 dgts.
Diode Test Range:	4V max. @ 400 Ω range, 2V max. @ other ranges
Accuracy:	\pm 0.3% rdg. + 1 dgt.
Measuring Current:	3mA
Continuity:	\leq 30 Ω (buzzer sounds)

LOGIC ANALYZER

Vertical Axis

Input Channels:	8
Input R/C:	100k Ω \pm 5%/20 pF \pm 5 pF
Threshold Level:	1.4V approx. (TTL level)
Max. Input:	35VDC
Min. Pulse Width:	> 50ns

Horizontal Axis

Sweep Time:	One Shot Mode: 1 μ s/div to 0.1 s/div; Roll Mode: 0.2 s/div to 2 s/div
Sweep Modes:	Cont., Single
H Position:	One Shot Mode: 0 - 96 div; Roll Mode: 0 - 12 div

Trigger

Pattern:	1, 0, X
Position:	0 to 12th/div
Display Mode:	Timing, State

FREQUENCY COUNTER

Range:	5Hz to 20MHz
Mode:	Auto/manual
Function:	FREQ., PERIOD
Input Source:	CH1, CH2
Input R/C:	1M Ω \pm 2%/28 pF \pm 5 pF

GENERAL

Save/Load:	Object: DSO, LOGIC mode; Kind: Waveform, Setup Data; Memory Number: 4 (REF1 - REF4)
Communications:	RS-232C
Baud Rate:	4800 bps
Contents:	Display image
Display Type:	Graphic LCD (CCFL)
Dot Number:	320 (W) x 240 (H)
Power Supply:	NiMH rechargeable battery, AC adapter
Dimensions:	156 x 60 x 250mm
Weight:	2.0 kg

Model	Description	Price
DSO-20	Oscilloscope	\$1195.00

OSCILLOSCOPES

Features:

- **Model OS-9030:** DC to 30MHz frequency bandwidth
- **Model OS-9060:** DC to 60MHz frequency bandwidth
- 2-channel, dual trace
- 6" rectangular CRT with internal graticule
- Max. input voltage: 400Vp-p
- Sensitivity: 1mV/div
- Sweep magnification (X10)
- High sensitivity X-Y mode
- ALT triggering function (vertical mode)
- CH2 polarity inversion switch
- TV sync. separator circuit
- Cooling fan system



MODEL		OS-9030	OS-9060	
CRT	Configuration Screen	6" rectangular screen with internal graticule: 8 x 10 div (1 div = 1 cm) marking for measurements of rise time, 2mm subdivisions along the central axis		
	Accelerating Potential	+1.9kV approx. (ref. cathode)	+10kV approx. (ref. cathode)	
	Phosphor	P31 (standard)		
	Focussing	Possible with auto-focus connection circuit		
	Trace Rotation	Provided		
	Intensity Control	Provided		
Z-AXIS INPUT (INTENSITY MODULATION)	Input Signal	Positive going signal decreases intensity +5Vp-p or more signal cases noticeable modulation at normal intensity settings		
	Bandwidth	DC to 2MHz (-3dB)	DC to 3.5MHz (-3dB)	
	Coupling	DC		
	Input Impedance	20kΩ to 30kΩ typical		
	Max. Input Voltage	30V (DC + peak AC)		
VERTICAL DEFLECTION	DC Coupled Bandwidth	DC to 30MHz normal, DC to 10MHz magnified	DC to 60MHz normal, DC to 10MHz magnified	
	AC Coupled Bandwidth	10MHz to 30MHz normal, 10Hz to 10MHz magnified	10MHz to 60MHz normal, 10Hz to 10MHz magnified	
	Modes	CH1, CH2, DUAL, ADD, ALT, CHOP		
	Deflection Factor	5mV/div to 5V/div in 11 calibrated steps of 1-2-5 sequence. Continuously variable between steps at least 1:2.5.		
	Accuracy	Normal ±3%; Magnified: ±5%		
	Input Impedance	1MΩ in parallel with approx. 30pF		
Max. Input Voltage	Direct: 400V (DC + Peak AC); With probe: Refer to probe specifications			
	Input Coupling	DC-GND-AC		
	Rise Time	11.67ns or less (35ns or less: X5 mag.)	5.8ns or less (35ns or less: X5 mag.)	
	CH1 Out	20mV/div into 50Ω: DC to 10MHz (-3dB)		
	Polarity Inversion	CH2 only		
HORIZONTAL DEFLECTION	Display Mode	Normal, X-Y, X10, Variable		
	Time Base	0.1μs/div to 0.2s/div in 20 calibration steps, 1-2-5 sequence. Uncalibrated continuous control between steps at least 1:2.5.		
	Sweep Magnification	10 times (max. sweep rate: 10ns/div)		
	Accuracy	±3%, ±5% (0 to 40°C), Additional error for magnified: ±2%		
TRIGGER SYSTEM	Modes	AUTO, NORM, TV-V, TV-H		
	Source	CH1, VERT (CH1, CH2), EXT, LINE		
	Coupling	AC		
	Slope	+ or -		
	Sensitivity and Frequency	OS-9030	DC-2MHz	2MHz-20MHz
Auto, Norm	OS-9060	DC-10MHz	10MHz-60MHz	
	INT	0.5 div	1.5 div	2.0 div
	EXT	0.2 Vp-p	0.6 Vp-p	0.6 Vp-p
	TV-V, TV-H	At least 1 div or 1.0Vp-p		
	External Trigger Input Impedance	1MΩ (in parallel with approx. 25pF)		
	Max. Input Voltage	400V (DC + Peak AC)		
X-Y OPERATION	X-Axis	Same as CH1 except for deflection factor.		
	Y-Axis	Reflection Factor: same as that of CH1 accuracy (±5%)		
	X-Y Phase Difference	Same as CH2		
	X-Y Phase Difference	3° or less (at DC to 50kHz)		
CALIBRATOR	Probe Adjustment	1kHz (±20%) Frequency, 0.5V (±20%) / Square wave duty ratio: 40-60%		
PRICE		\$595.00	\$1195.00	

OSCILLOSCOPE CURRENT PROBES

Features:

- Easy and accurate way to add current measurement capability to your oscilloscope
- Switch selectable ranges
- Direct BNC connection to scope



Model	SL261 (1201.51)	SR661 (2113.49)	JM861 (2110.90)
No. of Ranges	2	3	3
Current Range	100mA - 100A AC/DC	1 - 1000A AC	1 - 9000A AC
Frequency Range	DC to 100kHz	DC to 100kHz	DC to 100kHz
Max. Conductor Size	0.46"	2.05"	2.52"
Accuracy	±2% to 4%	±2% to 4%	±2% to 4%
Price	\$557.00	\$417.00	\$551.00

OSCILLOSCOPE CURRENT PROBES



Model	I200s	80i-500s	I1000s	I2000FLEX	I3000s
Current Range	0-20A/200A	0 - 500A	0-10/100/1000A	0 - 2000A	1-30/300/3000A
Highest AC Current	240A	700A for 10 min.	2000A peak	1000kA	4000A for 5 min.
Accuracy	≤3.5% to 0.5A	<20A: 5% rdg. +0.3A <100A: 5% rdg 100-500A: 2.5% rdg	10A: 3% rdg ±100mA 1000A: 2% rdg	±1%	30A: 2% rdg. +0.1A 300A: 2% rdg +0.5A 3000A: 2% rdg +0.1A
Frequency Response	40Hz - 10kHz	5Hz - 10kHz	5Hz - 100kHz	1Hz - 20kHz	10Hz - 100kHz
Working Voltage	600VAC	600VAC	600VAC	600VAC	600VAC
Common Mode Voltage		600VAC	600VAC		600VAC
Max. Conductor Size	20mm (0.79")	30mm (1.3")	54mm (2.1")		64 x 100mm (7.5 x 3.9")
Output Levels	10, 100mV/A	1mV/A	1, 10, 100mV/A	1, 10mV/A	0.1, 1, 10mV/A
Price	\$237.00	\$271.00	\$565.00	\$406.00	\$646.00

FLEXIBLE CURRENT PROBES



Features:

- Single or dual range to measure up to 3000A
- True rms measurements when connected to a Trms instrument
- Insensitive to DC, measures only AC component on DC + AC
- No core saturation or damage if overloaded
- Excellent linearity
- Waterproof sensor
- Shape Memory for pre-shaping of sensor before use
- 9V alkaline battery provides 2000 hours of continuous operation
- EN 61010 1000V Cat. III (sensor); EN 61010 600V Cat. III (module)

Specifications:

Model	2120.66	2120.67	2120.68	2120.69
Electrical				
Current Range	5-1000A	5-100A; 50-1000A	5-3000A	5-300A; 50-3000A
Output Signal	1mV/A	10mV/A; 1mV/A	0.333mV/A	3.33mV/A; 0.333mV/A
Residual Current	500mArms	200mArms	500mArms	200mArms
General				
Sensor Length	24"/609mm	24"/609mm	36"/914mm	36"/914mm
Conductor Size	24": 7.6"/193mm; 36": 11.5"/292mm			
Cable Length	6.5 ft /2m			
Output Connect.	14"/0.35m double insulated cable w/ 4mm banana plug			

Model	Description	Price
2120.66	LGLF1000-24-1-1, 1000A, 24", 0.1mV/A	\$585.00
2120.67	LGLF1000-24-2-1, 100/1000A, 24", 1/10mV/A	\$614.00
2120.68	LGLF3000-36-1-1, 3000A, 36", 0.3mV/A	\$687.00
2120.69	LGLF3000-36-2-1, 300/3000A, 36", 0.3/3.3mV/A	\$716.00

FLEXIBLE CURRENT PROBES



Features:

- mV AC and A AC output
- True rms measurements
- Single and dual range models
- Compatible with any meter, logger, recorder or oscilloscope
- Accuracy is 1% of reading
- Current ranges from 30 to 10,000A
- Frequency response 10 to 20,000Hz
- Clamps around any shape up to 10" - even bus bars
- Low phase shift for power measurements
- Insensitive to DC, measures only AC component on DC + AC signals
- Waterproof sensor
- 1000V IEC 1010 Cat. III, 600V IEC1010 Cat. IV

Model	Description	Price
2112.39	Flexible Current Probe, 1000A, 24"	\$417.00
2112.46	Flexible Current Probe, 3000A, 24"	\$445.00
2112.98	Flexible Current Probe, 100/1000A, 24"	\$445.00
2113.05	Flexible Current Probe, 300/3000A, 24"	\$473.00
2112.00	Flexible Current Probe, 300/3000A, 36"	\$543.00
2112.02	Flexible Current Probe, 1000/10,000A, 36"	\$752.00
2118.46	Shrouded Banana to Male BNC Adapter	\$56.00

OSCILLOSCOPE ACCESSORIES

For both professional engineers and home hobbyists, the **510 Series** combines accuracy, high performance, and durability in an economical probe. Recommended for applications requiring continued rugged use.

Model	Atten.	Length	Input Res.	Max. Loaded Input Cap.	Overall Bandwidth	Overall Rise Time	Price
510-10-2	x10	2.0m	10MΩ	12pF	100MHz	15-50ns	\$42.00
510-SW-1	x1	1.5m	1MΩ	75pF	10MHz	n.a.	\$35.00
	x10		10MΩ	11pF	100MHz	15-50ns	
510-SW-2	x1	2.0m	1MΩ	95pF	10MHz	n.a.	\$47.00
	x10		10MΩ	12pF	100MHz	15-50ns	



BNC Adapters



Model	Description	Price
3283	BNC (f/f) Adapter	\$7.00
3533	BNC (m/m) Adapter	\$14.00
3285	BNC (f/m/f) Adapter	\$19.00
3284	BNC (f/f/f) Adapter	\$21.00
4896	BNC (m/f/f) Adapter	\$29.00
3534	BNC (f/m) Right Angle Adapter	\$16.00
3846	BNC (f/f) Isolated Ground Adapter	\$22.00

BNC Male w/ Molded Strain Relief to Mini-grabber Test Clips

- Rating: 45VAC max.
- Temperature: 50°C (122°F) max.



Model	Description	Price
5187-C-24	RG, 58C/U Cable, .195" O.D. x 24"L	\$22.00
5187-C-36	RG, 58C/U Cable, .195" O.D. x 36"L	\$22.00
5187-C-48	RG, 58C/U Cable, .195" O.D. x 48"L	\$24.00
5187-C-60	RG, 58C/U Cable, .195" O.D. x 60"L	\$24.00
5187-K-24	RG, 174/U, .100" O.D. x 24"L	\$31.00
5187-K-36	RG, 174/U, .100" O.D. x 36"L	\$31.00
5187-K-48	RG, 174/U, .100" O.D. x 48"L	\$32.00
5187-K-60	RG, 174/U, .100" O.D. x 60"L	\$32.00

Model 1296 BNC Male to Stackable Binding Posts

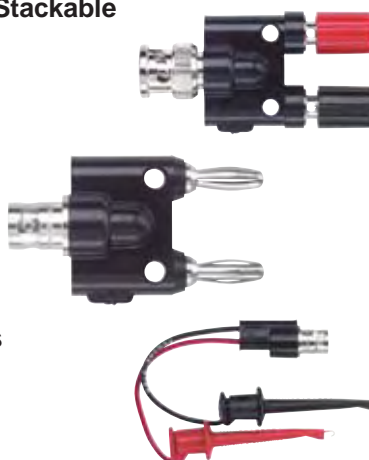
- Rating : 500Vrms max.
- 50°C (122°F) max.

Model 1269 BNC Female to Double Stacking Banana Plug

- Rating: 500Vrms max.
- 50°C (122°F) max.

Model 3788 BNC Female to Minigrabber® Test Clips

- Overall length: 7.0"
- Rating: 45VAC
- 55°C (131°F).



Model	Description	Price
1296	BNC Male to Stackable Binding Posts	\$17.00
1269	BNC Female to Double Stacking Banana Plug	\$9.00
3788	BNC Female to Minigrabber® Test Clips	\$13.00

Model 3073 Male to Multi-Stacking Banana Plug

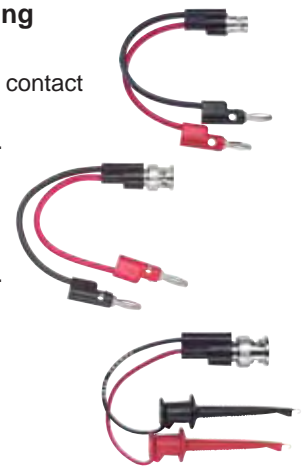
- Gold plated beryllium copper center contact
- Overall length: 7.0"
- Rating: 500VAC, 55°C (131°F) max.

Model 3957 Male to Multi-Stacking Banana Plug

- Overall length: 7.0"
- Rating: 500VAC, 55°C (131°F) max.

Model 3789 Male to Minigrabber® Test Clips

- Overall length: 7.0"
- Rating: 45VAC, 55°C (131°F) max.



Model	Description	Price
3073	BNC Female to Multi-Stacking Banana Plug	\$12.00
3957	BNC Male to Multi-Stacking Banana Plug	\$18.00
3789	BNC Male to Minigrabber® Test Clips	\$16.00

FREQUENCY COUNTER



Specifications:

Frequency Range:	Input A: 0.1 Hz - 100 MHz; Input C: 80MHz - 1.5GHz
Gate Time:	0.01 sec, 0.1 sec, 1 sec, 10 sec
Resolution:	1nHz to 10Hz
Accuracy:	± Resolution ± Timebase error ±1 count
Input Sensitivity:	Input A: 30mVrms; Input C: 30mVrms
Input Impedance:	Input A: 1MΩ, <40pF; Input C: 50Ω
Max. Input Voltage:	Input A: 250mVrms; Input C: 3Vrms
Attenuator:	Input A: X1, X10
Period Range:	10msec to 10 sec
Totalizer Range:	5Hz to 10MHz
Count Capacity:	0 to 999999999
RPM Range:	6 to 900 x 10 ⁶ rpm
Time Base Output:	Frequency: 10MHz; Impedance: 600Ω; Amplitude: 1.5Vp-p
Ext. Time Base Input:	Frequency: 10MHz; Impedance: 600Ω; Input Level: 1.5Vrms to 5Vrms
Power Supply:	115/230VAC ±10%, 48 to 66Hz

Features:

- Frequency measuring range: 0.1Hz to 100MHz in A input; 80MHz to 1.5GHz in C input
- 9-digit LED display with 0.01mHz resolution
- Period, RPM and total measurement
- RS-232C serial interface function
- Reciprocal technique for high resolution
- High sensitivity external reference
- AC/DC coupling
- 10:1 input attenuation
- Data hold function

Model	Description	Price
FC-8150	Frequency Counter	\$430.00

FREQUENCY COUNTER

Features:

- Microprocessor counter measures to 2.5 GHz
- High sensitivity in low/high ranges
- Max, Min & Average readings
- Relative frequency measurements
- Large 0.5" 8-digit LCD display
- Period display values from 10Hz to 10MHz
- Data Hold; Auto power off; Overload indication
- Gate time selector (Fast/Slow sampling time)



Specifications:

Range (Frequency):	Channel A: 50 MHz to 2500MHz, Channel B: 10 MHz to 500 MHz, Channel C: 10 Hz to 10MHz Period: 10 Hz to 10 MHz
Maximum Resolution:	0.1 Hz
Sensitivity:	Channel A, B, C: < 50 mV rms
Input Impedance:	Channel A & B: 50Ω typical, Channel C: 1MΩ/30pF typical, AC coupled
Max. O/L Protection:	5V peak to peak, Channel C: 250V peak to peak
Time Base Circuit:	4.194 MHz quartz crystal
Connector:	BNC

Model	Description	Price
FC-2500	Frequency Counter	\$374.00

PROCESS POWER SUPPLY

Features:

- High density, miniature power pack
- Designed to drive up to eight 4-20 mA process loops
- Also a general purpose power supply
- Ideal for powering process instrumentation directly, or acting as a loop power source for two-wire transmitters and loop powered meters in single or multiple process loop applications

Specifications:

Input Power: User-selectable; 105-125VAC: nominal 115VAC
210-250VAC: nominal 230VAC

Output Voltage: 24V

Output Current: 0.175A

Regulation: Line: $\pm 0.1\%$; Load: $\pm 0.1\%$

Ripple & Noise: 1mV rms

Dimensions: 3 x 2.7 x 1" (chassis mounted)

Weight: 10 oz



Model	Description	Price
24/75STS-3	Process Power Pack	\$183.00

LOOP POWER SUPPLIES



Features:

- Use to power DC operated peripherals and input/output modules on PLC's or transmitters in process control
- Compact and easy to mount

Specifications:

Input Power: 115VAC $\pm 5\%$ / 60Hz

Output Voltage: **MECPS-5:** 5V ± 0.2 VDC @ 300mA;
MECPS-12: 12V ± 0.5 VDC @ 200mA;
MECPS-24: 24V ± 1 VDC @ 100mA;

Dimensions: 3 x 2.2 x 1.4"

Model	Description	Price
MECPS-5	Loop Power Supply, 5V	\$70.00
MECPS-12	Loop Power Supply, 12V	\$70.00
MECPS-24	Loop Power Supply, 24V	\$70.00

LINEAR POWER SUPPLY

Features:

- Provides 24V power to drive up to 50, 4-20mA process loop currents, or power transducers
- 1A output current
- User selectable 120VAC or 220VAC
- Fused overload protection

Specifications:

Input Power: 120VAC or 220VAC $\pm 10\%$

Output Voltage: 24VDC $\pm 5\%$

Output Current: 1A max.

Regulation: Line: $\pm 0.2\%$; Load: $\pm 0.2\%$

Ripple & Noise: 1mV rms

Input Protection: 0.5A fuse

Output Protection: Current limited and thermal limited

Dimensions: 7.625 x 3.0 x 2.5"

Weight: 1.5 lb.



Model	Description	Price
MEC24-1000	24V Linear Power Supply	\$229.00

DC POWER SUPPLIES



Features Model PS-3030DU:

- Dual output: 30V/3A
- Dual LED displays
- Constant voltage and current
- Built-in current limit circuit
- Coarse and fine voltage control
- Low ripple and noise

Features Model PS-303 & PS-305:

- Single output: 30V/3A (*PS-303*); 30V/5A (*PS-305*)
- Single LED display
- Constant voltage and current
- Built-in current limit circuit
- Coarse and fine voltage control
- Low ripple and noise

MODEL		PS-3030DU	PS-303	PS-305
OUTPUT	Voltage Current	0-30V dual 0-3A dual	0-30V 0-3A	0-30V 0-5A
CONSTANT VOLTAGE	Load Regulation (0 to 100% load variation) Line Regulation (0 to 10% line variation) Ripple and Noise (rms)		8mV 8mV 0.5mV	
CONSTANT CURRENT	Load Regulation (0 to 100% load variation) Line Regulation (0 to 10% line variation) Ripple and Noise (rms)	10mA 4mA 3mA	10mA 4mA 3mA	20mA 8mA 5mA
DISPLAY	Voltmeter Accuracy Regulation Ammeter Accuracy Regulation LED Indicators		3-digit red LED ±(0.2% rdg. + 2 dgt.) 100mV 3-digit red LED ±(1.0% rdg. + 3 dgt.) 10mA Green LED: CV; Red LED: CC	
GENERAL	Operating Temp. Cooling Method Voltage to Ground Insulation Resistance Power Supply		0 to 35°C, 10 to 80%RH Free air ±200VDC 30MΩ @ 500VDC: AC input to chassis; 20MΩ @ 500VDC: chassis to input terminal 115V/230V selectable	Fan
PRICE		\$515.00	\$295.00	\$375.00

POWER SUPPLIES



Features:

- Linear technology: stability, low noise (<1mVrms ripple)
- Active protection against short-circuits, overloads and over-heating, limit indicator voltage shutdown
- Double insulated
- High efficiency toroidal transformers; no fan required and low EM emissions
- Conforms with IEC 61010, Cat. I, 100V
- Master/slave tracking (**AX502 & AX503 only**)
- Additional 3V/5V/5A output (**AX503 only**)

This comprehensive range of linear power supplies with digital displays are designed to meet the requirements of educational institutions, laboratories and maintenance departments. It offers a high level of operating safety through the use of double insulated outputs and protection from overloads, short circuits and overheating.

Model	AX501 (2130.05)	AX502 (2130.06)	AX503 (2130.07)
No. of Outputs	1	2	3
VOLTAGE	0 to 30 VDC		
Output 1	0 to 30.0 VDC		
Output 2	-	0 to 30.0 VDC	
Accuracy	±0.5% rdg. + 1 ct.		
Output 3	-	-	3 & 5VDC (2.7-5.5VDC)
CURRENT	0 to 2.5A		
Output 1	0 to 2.5A		
Output 2	-	0 to 2.5A	
Accuracy	±0.5% rdg. + 1 ct.		
Output 3	-	-	5A (fixed)
OUTPUT COUPLING	Output 1 Master, Output 2 Slave		
Tracking	-	0 to 60VDC/0 to 2.5A	
Series Mode	-	0 to 30VDC/0 to 5A	
Parallel Mode	-		
LINE REGULATION	±0.03% rdg. + 2mV		
±10% Line Voltage			
LOAD REGULATION	±0.2% rdg. + 5mV		
0 to 2.5A			
0 to 5A	-	-	±0.2% rdg. +10mV
Price	\$690.00	\$969.00	\$1108.00

FUNCTION GENERATOR



Features:

- 0.02Hz to 2MHz frequency output
- 4-in-1 sweep, function and pulse generator and frequency counter
- Versatile waveforms for sine, square, triangle
- Ramp, pulse, sawtooth and DC outputs
- Variable symmetry for sawtooth and pulse
- TTL and CMOS waveform output
- Variable DC offset control

Specifications:

Waveforms: Sine, Square, Triangle, Ramp, Pulse, Sawtooth, TTL/CMOS Square, skewed sine and DC

Frequency Range: 0.02Hz to 2MHz in 7 ranges

Output Level: ±5% f.s. frequency accuracy, 20Vp-p in open circuit

Output Impedance: 10Vp-p into 50Ω load, 50Ω ±5%

Attenuator: 20dB fixed and continuously variable

Sine Wave
Flatness: ±3dB to 2MHz;
Distortion: ≤ 1% at 0.2Hz to 100kHz

Square Wave: Rise & Fall Time: < 120ns

Triangle Wave: Linearity: > 99% to 100kHz

TTL/CMOS Output: Rise & Fall Time: TTL: ≤20ns; CMOS: ≤140ns
Output Level: TTL: H: ≥2.4V, L: ≤0.4V
CMOS: 5 to 15V ±1V

Symmetry Variation: 1:1 to 10:1

Sweep Mode/Width: Linear/Variable from 1:1 to 100:1

Frequency Range: 200mHz to 50MHz

Low Pass Filter: -3dB, 100kHz

Sweep Time Base: 10MHz, X-Tal, 20ppm

Input Sensitivity: 100mVrms

Max. Input Voltage: 35Vp-p

Power Supply: 115V or 230VAC ± 10%, 48 to 66Hz

Model	Description	Price
FG-8102	Sweep Function Generator	\$410.00

FUNCTION GENERATORS

Features Model GFG-8215A:

- Frequency Range: 0.3Hz to 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL & CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator

Features Model GFG-8216A:

- Frequency Range: 0.3Hz to 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL & CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator
- Built-in 6-digit counter with INT/EXT function

Features Model GFG-8217A:

- Frequency Range: 0.3Hz to 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL & CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator
- Built-in 6-digit counter with INT/EXT function
- LIN/LOG sweep mode

Features Model GFG-8250A:

- Frequency Range: 0.5Hz to 5MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL & CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator
- Built-in 6-digit counter with INT/EXT function



Features Model GFG-8219A:

- Frequency Range: 0.3Hz to 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL & CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator
- GVC output for synchronization
- Built-in 6-digit counter with INT/EXT function
- LIN/LOG sweep mode
- INT/EXT AM/FM modulation

Features Model GFG-8255A:

- Frequency Range: 0.5Hz to 5MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL & CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator
- GVC output for synchronization
- Built-in 6-digit counter with INT/EXT function
- LIN/LOG sweep mode
- INT/EXT AM/FM modulation

Model	GFG-8215A	GFG-8216A	GFG-8217A	GFG-8219A	GFG-8250A	GFG-8255A
Frequency Range	0.3Hz~3MHz (7ranges)			0.5Hz~5MHz (7 ranges)		
Amplitude				>10Vpp (into 50Ω load)		
Impedance				50Ω ±10%		
Attenuator				-20dB ±1dB x 2		
DC Offset				<-5V ~ >5V (into 50Ω load)		
Duty Control				80%:20%:80% to 1 MHz continue variable		
Display	Does not have a display			6-digit LED display		
Sine Wave Distortion	≤1%, 0.3Hz~200kHz; THD ≤-35dB			≤1%, 0.5Hz~100kHz; THD ≤-30dB		
Sine Wave Flatness	<0.3dB, 0.3Hz~300kHz; ≤0.5dB, 300kHz~3MHz			<0.3dB, <500kHz; ≤1dB, <5MHz		
Triangle Wave Linear	>98%, 0.3Hz~100kHz; ≥95%, 100kHz~3MHz			>98%, 0.5Hz~100kHz; ≥95%, 100kHz~5MHz		
Square Wave Symmetry	±2%, 0.3Hz~100kHz			±2%, 1Hz~100kHz		
Rise or Fall Time	≤100nS at maximum output (into 50Ω load)			≤50nS at maximum output (into 50Ω load)		
CMOS Output Level				4Vpp ±1Vpp~14.5Vpp ±0.5Vpp adjustable		
Rise or Fall Time				≤120nS		
TTL Output Level				≥3Vpp		
Fan Out				20 TTL load		
Rise or Fall Time				≤25nS		
VCF Input Voltage				0V~10V ±1V (100:1)		
Input Impedance				10kΩ ±10%		
Frequency Counter Range	0.3Hz~3MHz (5-Hz~150MHz EXT.)			0.5Hz~5MHz (5-Hz~150MHz EXT.)		
Accuracy				Time base accuracy ±1 count		
Time Base				±20ppm after 30 minutes warm up		
Resolution				100nHz for 1Hz & 1Hz for 100MHz		
Input Impedance				1MΩ/150pF		
Sensitivity				≤35mVrms (5Hz~100MHz); ≤45mVrms (100MHz~150MHz)		
GCV Output Voltage	-	-	-	0V~2V as per diff. frequency	-	0V~2V as per diff. frequency
Sweep Rate	-	-	-	100:1 ratio max. & adjustable	-	100:1 ratio max. & adjustable
Sweep Time	-	-	-	0.5~30 sec. adjustable	-	0.5~30 sec. adjustable
Sweep Mode	-	-	-	LIN/LOG switch selector	-	LIN/LOG switch selector
Amplitude Modulation	-	-	-	0~100%	-	0~100%
MOD Frequency	-	-	-	400Hz (INT), DC~1MHz (EXT)	-	400Hz (INT), DC~1MHz (EXT)
Carrier BW	-	-	-	100Hz~3MHz (-3dB)	-	100Hz~5MHz (-3dB)
EXT Sensitivity	-	-	-	≤10Vpp for 10% modulation	-	≤10Vpp for 10% modulation
Price	285.00	391.00	465.00	531.00	471.00	613.00

FUNCTION GENERATOR/FREQUENCY COUNTER



Features:

- 3MHz function generator with 60MHz auto range frequency counter
- Function Generator Range: 0.5Hz to 3MHz in 6 ranges
- Frequency Counter Range: 0.2Hz to 60MHz
- Sine, Square, Triangle, Ramp, + Pulse, - Pulse
- 5-digit, 0.36" high red LED display
- Power Supply: 115/230 VAC, 50/60 Hz

Model	Description	Price
FG-2003	Function Generator/Frequency Counter	\$599.00

TRANSFORMER RATIOMETER

Features:

- Designed for power transformers, potential transformers and current transformers
- Direct readings from 0.8000:1 to 1500:1
- Displays turns ratio, polarity and excitation current simultaneously
- Dual power: integrated rechargeable NiCd battery and AC supply
- ANSI/IEEE compliant measurement method -- no user calibration, range selection, hand cranking or tedious balancing
- Microprocessor based for simple operation
- Easy connection and test set-up -- no calibration or balancing required
- Displays warnings of incorrect lead connections, reverse polarity, open and short circuits
- Large, dual line display with adjustable contrast and backlight ensures clear visibility
- No high voltages -- uses low voltage test technique and integrated safety circuit
- Durable, impact-resistant case

Specifications:

Measurement Ratio Range: Autoranging 0.8000:1 to 1500:1
 Accuracy: Ratio \leq 1000:1: \pm 0.1% of reading
 Ratio \geq 1000:1: \pm 0.2% of reading

Excitation Signal

PT/VT Test Mode: 44 Vrms
 CT Test Mode: 0 - 1A auto level, 0.1 - 5Vrms

Excitation Current

Range: 0 - 100mA
 Accuracy: 2% of reading \pm 2mA
 Excitation Frequency: Factory programmed to 60Hz
 Power Supply: Dual operation; rechargeable NiCd battery & 110/220V, 50/60Hz line supply

Battery Life: Approx. 10 hrs. of continuous use (instrument may be used during recharging process). Charging time: approx. 12 hrs.

Operating Conditions: 14 to 131°F (-10 to 55°C),
 0 to 95% RH non-condensing

Display: Dual-line alpha-numeric 3.875 x .875" w/ contrast adjustment & backlight

Dimensions: 13 x 12 x 6" (330 x 305 x 152mm)

Weight: 14 lb (6.8kg)



Model	Description	Price
2111.80	8500 Digital Transformer Ratiometer includes AC line cord, test lead set (15-ft), in a carrying bag w/ user manual	\$4195.00
2118.47	Test Lead Set (30-ft) in Carrying Bag	\$509.00
2118.48	Replacement Set of Test Leads	\$359.00

MILLI-OHMMETER

Features:

- 7 ranges from 20mΩ to 20kΩ
- High 1A test current
- High resolution of 10μΩ
- Adjustable Hi/Lo comparator
- 3-1/2 digit LED display, 3" high

Specifications:

Ranges:	20, 200mΩ, 2, 20, 200Ω, 2k, 20kΩ
Resolution:	0.01, 0.1, 1, 10, 100mΩ, 1, 10Ω
Accuracy:	20mΩ: (0.2% rdg. + 6 dgt.); 200mΩ~20kΩ: ±(0.2% rdg. + 4 dgt.); Setting: ±(0.2% rdg. + 6 dgt.)
Comparator:	Indicates Hi/Lo values
Display:	3-1/2 digits 0.5" LED; HI, GO, LO indicator
Power Supply:	115V/230V ±10%, 50/60 Hz
Dimensions:	230 x 95 x 280mm
Weight:	2 kg



Model	Description	Price
GOM-801G	Milli-ohmmeter	\$471.00

MILLI-OHMMETER



Features:

- 4 terminal input for high accuracy of low resistance
- Wide measuring range: 0.01mΩ to 20kΩ, 7 ranges
- Large LED display
- LSI circuitry provides high accuracy, reliability and durability
- HI/LOW warning setup
- Built-in overload protection
- 4-wire with 2 Kelvin clips included
- Dimensions/Weight: 11 x 8.3 x 3.5" / 4.85 lbs

Model	Description	Price
MO-2002	Milli-ohmmeter	\$595.00

MILLI-OHMMETER



Features:

- 4 terminal input for high accuracy of low resistance
- Measuring Range: 0.1mΩ to 2000Ω, 5 ranges
- Large LCD display
- LSI circuitry provides high accuracy, reliability & durability
- Zero adjustment
- Built-in overload protection
- 4-wire with 2 Kelvin clips included
- Dimensions/Weight: 6.3 x 4.7 x 3.3" / 1.5 lbs

Model	Description	Price
K5090	Milli-ohmmeter	\$465.00

MICRO-OHMMETER



To prevent accidental shocks and assure safety of personnel, as well as to reduce or eliminate down time, a regular program of testing insulation resistance is strongly recommended. It helps to detect deterioration of insulation in order to schedule repair work such as vacuum cleaning, air lance cleaning, steam cleaning, drying and rewinding. It is also helpful when evaluating the quality or repairs before equipment is put back into operation.

The *Micro-Ohmmeter Model 5600* performs reliable low resistance measurements with test currents to 10 A and resolution to one micro-ohm.

The *Model 5600* uses a four-wire Kelvin bridge method, which eliminates test lead resistance for a measurement accuracy of 0.25%. A reverse polarity switch compensates for the effect of DC voltage interference on the accuracy and permits reading averaging. A built-in circuit filters against AC signals.

The *Micro-Ohmmeter Model 5600* is housed in a sealed field case. Power is supplied by a long-life NiCad battery with a built-in charger (110/220 V). The large, easy-to-read LCD is 18 mm high; it displays the value of resistance, and indicates over-range and reversed connection of measurement leads.

Four LEDs on the front panel indicate measurement faults (open circuit, blown fuse, etc.); thermal protection; low battery and battery charging.

For operator safety and instrument protection, the *Micro-Ohmmeter* is fuse protected at the inputs. Two fuses, accessible on the front panel, protect against stored energy in inductive loads.

Enhanced internal circuitry protect against kickback when the current is shut off. A built-in thermal switch protects the ohmmeter against overheating on the 10 A range when in continuous use.

Features:

- Four-terminal Kelvin resistance measurement
- 10 A regulated test current
- 0.25% basic accuracy
- 1 micro-ohm resolution
- Six selectable resistance ranges
- Overload and input fuse protection
- Reverse polarity switch
- Automatic decimal point and zero
- Rechargeable NiCad battery with integral charger (110/220 V)
- Large terminals accept banana plugs and spade lugs
- Manufactured to international safety and environmental standards
- Rugged field case for industrial applications

Specifications:

ELECTRICAL

Ranges	Resolution	Test Current
2000 $\mu\Omega$	1 $\mu\Omega$	10 A
20 m Ω	10 $\mu\Omega$	1 A
200 m Ω	100 $\mu\Omega$	1 A
2000 m Ω	1 m Ω	100 mA
20 Ω	10 m Ω	10 mA
200 Ω	100 m Ω	10 mA

Accuracy (at 23°C $\pm 3^\circ$, 40 to 60% RH):

2000 $\mu\Omega$ Range:	0.25% typical, 0.5% max ± 2 digits
Other Ranges:	0.25% typical, 0.5% max ± 1 digit
Power Supply:	Rechargeable 6 V, 7 Ah NiCad battery; built-in 110/220V (47-450 Hz) charger; automatic shut off after 4 mins. non-use

Battery Life (Typical):

200 $\mu\Omega$ Range:	200 to 300 8-second measurements
20-200 m Ω Ranges:	900 30-second measurements
Other Ranges:	5000 30-second measurements
Operating Voltage:	4.5 - 7 VDC
Recharge Time:	14 hrs. from full discharge

MECHANICAL

Operating Temp.:	14° to 131°F (-10° to 55°C)
Display:	2000 count, 7-segment LCD
Case:	Fiberglass-reinforced polycarbonate, with handle and removable lid, watertight to IP534 (lid closed), IP520 (lid open)
Connections:	Terminals accept 4mm banana plugs or 6mm (min) spade lugs
Dimensions:	15.35" x 10.24" x 9.84" (390 x 260 x 250 mm)
Weight:	17 lb. 10 oz. (8 kg approx.)

SAFETY

Dielectric Test:	IEC 348, 1500 V 60 Hz (input terminals); 3000 V 60 Hz (power supply)
O/L Input Protection:	380 V rms
Fuses	Two high-interrupting capacity 8 A, 380 V, 1 1/4 x 1/4"

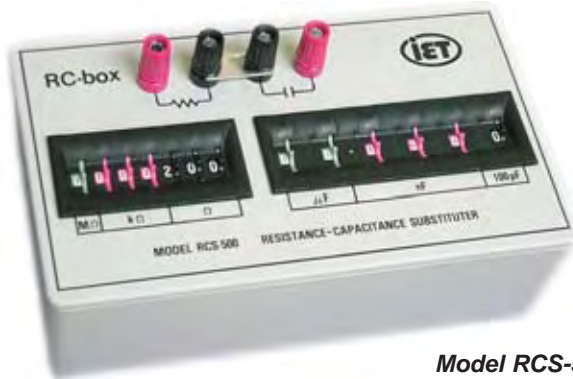
Model	Description	Price
1431.01	5600 Micro-Ohmmeter	\$3478.00
1017.82	Two Kelvin Probe w/ banana plug output (up to 10A)	\$230.00
1017.83	1A Kelvin Clips w/spade lug terminations	\$180.00
1017.84	Large 10A Clips w/spade lug terminations	\$278.00
2960.12	Battery, 6V rechargeable NiCad	\$279.00
2133.72	Tool Bag, Small	\$42.00

All probes come with 10 ft. colour coded leads

SUBSTITUTION BOXES



Model LS-400



Model RCS-500

RS Series Features:

- Direct reading, no fumbling with multiple slide or rotary switches
- Wide range
- Accurate

CS Series Features;

- Compact, convenient, rugged
- Standard and custom models
- Error-proof to enhance the capabilities of units in both series

LS and RCS Features:

- Colour-coded
- Shielded case with grounding post
- Protection fuse

Specifications (continued):

* Accuracy = $\pm(\text{Specified basic accuracy} + 0.08 \times \text{Residual Impedance})$ after subtraction of residual Impedance is reduced to 0.04 (or 5 pF for lowest decade with LR option. This makes for more effective usage of low impedances.

** Higher power resistance substitutes (1 watt or higher) available.

Additional information for inductance substituters

Inductance	Frequency Range	Max. Q	Rating
0.1 - 9mH	300 Hz-2 MHz	100 @ 800 kHz	700 mA
1 - 9mH	300 Hz-1 MHz	80 @ 40 kHz	500 mA
10 - 90mH	300 Hz-800 kHz	80 @ 40 kHz	300 mA
0.1 - 0.9H	300 Hz-200 kHz	40 @ 20 kHz	100 mA
1- 9 H	200 Hz-20 kHz	30 @ 8 kHz	20 mA
10 - 90 H	200 Hz-6 kHz	60 @ 2 kHz	4 mA

Specifications:

Model	Resistance				Capacitance		Res. & Cap.		Inductance	
	RS-200	RS-201	RS-200W	RS-201W	CS-300	CS-301	CS-500	RCS-502	LS-400	LS-400A
Type	Res.	Precision Res.	Wide range Res.	Wide range Precision Res.	Cap.	Precision Cap.	Res. Cap.	Precision Res. Cap.	Wide range Ind.	Ind.
Accuracy	$\pm(1\% + 25 \text{ m}\Omega)$		$\pm(0.1\% + 30 \text{ m}\Omega)$		$\pm(4\% + 3 \text{ pF}) \pm(1\% + 3 \text{ pF})$		RS-200 & CS-300	RS-201 & RS-301	$\pm(2\%+0.5\mu\text{H})$	$\pm(2\% + 0.5 \mu\text{H})$
Decades	7		9		6				4	3
Range	0-9, 999, 999 Ω		0-99, 999, 999.9 Ω		0-99, 9999 pF				0-9.999H	0-999mH
Resolution	1 Ω	0.1 Ω	100 pF						1 mH	1 mH
Ratings	0.5 Watt**				100V (20V for 10-100 (F))					
Impedance	0.3 $\Omega(0.04\Omega/\text{dec.})\dagger$, typical			0.4 $\Omega(0.04\Omega/\text{dec.})\dagger$, typical		30 pF(5 pF/dec.) \dagger , typical			0.2 $\Omega(0.04\Omega/\text{dec.})\dagger$,	
Dimensions/Weight	8.1 x 7.9 x 5.6 cm; 184g (3.2 x 3.1 x 2.2"; 6.5 oz)		12 x 7.9 x 5.6 cm; 235g (4.7 x 3.1 x 2.2"; 8.3 oz)			18.8 x 11 x 6 cm, 410g (7.4 x 4.3 x 2.4"; 14 oz)			12 x 7.9 x 5.6 cm; 230g (4.7 x 3.1 x 2.2"; 8 oz)	

Model	Description	Price
RS-200	Resistance Substituter	\$280.00
RS-201	Precision Resistance Substituter	\$521.00
RS-200W	Wide Range Resistance Substituter	\$521.00
RS-201W	Wide Range Precision Resistance Substituter	\$866.00
CS-300	Capacitance Substituter	\$304.00
CS-301	Precision Capacitance Substituter	\$561.00
RCS-500	Resistance Capacitance Substituter	\$577.00
RCS-502	Precision Resistance Capacitance Substituter	\$1074.00
LS-400	Wide Range Inductance Substituter	\$1858.00
LS-400A	Inductance Substituter	\$1090.00
CC-25	Lead Clip	\$79.00

RESISTANCE DECADE BOXES



Features - HARS Series

- High Accuracy and stability
- Low temperature coefficient
- Low zero resistance
- Rack mounting and special configurations

Specifications:

Accuracy: $\pm(0.01\% + 2 \text{ m}\Omega)$ after subtraction of zero resistance, at 23°C
 Zero Resistance: 1 mΩ per decade, at DC
 Maximum Voltage: 2000V peak
 Resistance Temp. Coefficient: $<\pm 20 \text{ ppm}/^\circ\text{C}$ for $\leq 10\Omega$
 $<\pm 10 \text{ ppm}/^\circ\text{C}$ for $\leq 100\Omega$

Terminals: Low thermal emf beryllium copper binding posts

Dimensions:
 3-5 decades: 37.5 x 8.9 x 10.2 mm
 (14.8" x 3.5" x 4")
 6-8 decades: 43.9 x 8.9 x 10.2 mm
 (17.3" x 3.5" x 4")
 9 decades: 48.3 x 17.8 x 19.7 mm
 (19.0" x 7.0" x 7.8")

Model	Total Resist.	Decades	Resolution	Price
HARS-X-4-0.001	11.1, 1Ω	4	0.001Ω	\$2712.00
HARS-X-4-0.01	111.1Ω	4	0.01Ω	\$2712.00
HARS-X-4-0.1	1.111kΩ	4	0.1Ω	\$2712.00
HARS-X-4-1	11.11kΩ	4	1Ω	\$2712.00
HARS-X-4-10	111.1 kΩ	4	10Ω	\$2712.00
HARS-X-4-100	1.111 MΩ	4	100Ω	\$2872.00
HARS-X-4-1K	11.11 MΩ	4	1kΩ	\$3675.00
HARS-X-5-0.001	111.11Ω	5	0.001Ω	\$3033.00
HARS-X-5-0.01	1.111,1 kΩ	5	0.01Ω	\$3033.00
HARS-X-5-0.1	11.111 kΩ	5	0.1Ω	\$3033.00
HARS-X-5-1	111.11 kΩ	5	1Ω	\$3033.00
HARS-X-5-10	1.111,1 MΩ	5	10Ω	\$3193.00
HARS-X-5-100	11.111 kΩ	5	100Ω	\$4156.00
HARS-X-6-0.001	1.111, 11 kΩ	6	0.001Ω	\$3354.00
HARS-X-6-0.01	11.111, 1 kΩ	6	0.01Ω	\$3354.00
HARS-X-6-0.1	111.111 kΩ	6	0.1Ω	\$3354.00
HARS-X-6-1	1.111,11 MΩ	6	1Ω	\$3675.00
HARS-X-6-10	11.111,1 MΩ	6	10Ω	\$4317.00
HARS-X-7-0.001	11.111,1 kΩ	7	0.001Ω	\$3675.00
HARS-X-7-0.01	111.111,1 kΩ	7	0.01Ω	\$3675.00
HARS-X-7-0.1	1.111,111 MΩ	7	0.1Ω	\$3996.00

Specifications - HRRS Series

Accuracy: $\pm(1.0\% + 20 \text{ m})$ after subtraction of zero resistance
 Rating: 25W per step for any decade up to maximum applied voltage of 1000V (dc-ac peak); 255W maximum per decade, 250W maximum per unit.

Dimensions: Same as HARS-X above

Model	Total Resist.	Decades	Resolution	Price
HRRS-B-3-1M	1.11GΩ	3	1MΩ	\$3524.00
HRRS-B-3-10M	11.1GΩ	3	10MΩ	\$4005.00
HRRS-B-3-100M	111GΩ	3	100M	\$4166.00
HRRS-B-4-1M	11.11GΩ	4	1MΩ	\$4166.00
HRRS-B-4-10M	111.1GΩ	4	10MΩ	\$4808.00
HRRS-B-5-10K	1.111,1GΩ	5	10kΩ	\$4166.00
HRRS-B-5-1M	111.11GΩ	5	1MΩ	\$6413.00
HRRS-B-6-1K	1.111,11GΩ	6	1kΩ	\$4487.00
HRRS-B-6-10K	11.111,1GΩ	6	10kΩ	\$5450.00
HRRS-B-7-10	111.111,1GΩ	7	10Ω	\$4487.00
HRRS-B-7-1K	11.111,11GΩ	7	1kΩ	\$5771.00
HRRS-B-7-10K	111.111,1GΩ	7	10kΩ	\$6734.00
HRRS-B-2-1M-5KV	120 MΩ	2	1MΩ	\$4034.00
HRRS-B-2-10M-5KV	1.2GΩ	2	10MΩ	\$4484.00
HRRS-B-2-100M-5KV	12GΩ	2	100MΩ	\$5158.00
HRRS-B-2-1G-5KV	120GΩ	2	1GΩ	\$5383.00

Specifications - HPRS Series

Accuracy: $\pm 0.1\%$ for 10 MΩ steps and under;
 $\pm 0.2\%$ for 100 MΩ steps;
 $\pm 0.5\%$ for 1 GΩ steps;
 $\pm 1\%$ for 10 GΩ steps;
 $\pm 3\%$ for 1 TΩ steps

Temp. Coefficient: $<\pm 10 \text{ ppm}/^\circ\text{C}$ for 0.1 MΩ steps and under;
 $<\pm 15 \text{ ppm}/^\circ\text{C}$ for 0.1 MΩ steps and 10 MΩ steps;
 $<\pm 100 \text{ ppm}/^\circ\text{C}$ for 100 MΩ steps and 1 GΩ steps
 $<\pm 500 \text{ ppm}/^\circ\text{C}$ for 10 GΩ steps

Stability: 0.01%/year for 100 MΩ steps and under, shelf life; 0.05%/year for 1 GΩ, shelf life

Dimensions: Same as HARS-X table above

Model	Total Resist.	Decades	Resolution	Price
HPRS-F-6-0.01	10kΩ	6	0.01Ω	\$2728.00
HPRS-F-6-0.1	100kΩ	6	0.1Ω	\$2728.00
HPRS-F-6-1	1MΩ	6	1Ω	\$2728.00
HPRS-F-6-10	10MΩ	7	10Ω	\$2728.00
HPRS-F-7-0.1	1MΩ	7	0.1Ω	\$2888.00
HPRS-F-7-1	10MΩ	7	1Ω	\$2888.00
HPRS-F-8-0.1	1MΩ	8	0.01Ω	\$3049.00
HPRS-F-8-0.01	10MΩ	8	0.01Ω	\$3049.00
HPRS-F-9-0.01	10MΩ	9	0.01Ω	\$3209.00

RESISTANCE STANDARDS

Features:

- Stable, rugged
- Cost effective
- Wide range of values
- Optional non-standard values
- Optional transit case

Choose from the **SRA** or **SRL** series of durable, affordable testing instruments. The **SRA** Series is designed for use as a standard in industrial, research & educational laboratories. The **SRL** Series is an extremely high precision, sealed, resistance standard requiring no oil or other temperature bath.

Specifications:

SRA SERIES

Temperature Range: 15 to 30°C; maximum resistance change for the operating temp. range is 50 ppm

Power Supply: Power may be applied as long as the max. resistor temperature remains below 85°C; allow 10°C/w typical temperature rise

SRL SERIES:

Temperature Range: 18 to 28°C

Retrace: Permanent shift in resistance value is <2 ppm for 0 to 23°C cycle and 23 to 40 to 23°C cycle

Calibration Conditions: 4-wire Kelvin measurements with shield, low power, @ 23°C

Terminals: Four 5-way binding posts for 4-terminal measurement

Dimensions (HWD): 8.6 x 10.5 x 12.7 cm (3.4 x 4.15 x 5")

SRX/SRA Series:

Transfer grade standards: High accuracy and stability, low temperature coefficient

Nominal Value (Ω)	Adjustment to Nominal Value (ppm)		Stability 12 mos. (ppm)		Temp. Coef. (ppm/°C)		Power Coefficient (ppm/W)	Max. Power (W)		Model SRX	Price	Model SRA	Price
	SRX	SRA	SRX	SRA	SRX	SRA		SRX	SRA				
1	20	100	20	50	10	20	100	0.25	1	SRX-1	\$801.00	SRA-1	\$721.00
10	10	30	10	18	3	5	50	0.1	1	SRX-10	\$801.00	SRA-10	\$721.00
100	10	20	10	15	1	5	50	0.1	1	SRX-100	\$801.00	SRA-100	\$721.00
1K	10	20	10	15	1	5	50	0.1	1	SRX-1K	\$801.00	SRA-1K	\$721.00
10K	10	20	10	15	1	5	50	0.1	1	SRX-10K	\$801.00	SRA-10K	\$721.00
100K	10	20	10	15	1	5	50	0.1	1	SRX-100K	\$801.00	SRA-100K	\$721.00
1M	20	50	15	20	3	10	50	0.1	0.1	SRX-1M	\$962.00	SRA-1M	\$866.00
10M	20	50	15	50	5	10	50	0.01	0.01	SRX-10M	\$1604.00	SRA-10M	\$1444.00

SRL Series:

Highest grade standards: Highest accuracy and stability, very low temperature coefficient

Model	Nominal Value (Ω)	Calibration Accuracy (±ppm)	Stability* 12 mos. (ppm)	Max. Resistance Change (ppm) (23 ±5°C)	Maximum Voltage (V)	Power Limit [†] for Accuracy (mW)	Price
SRL-1	1	1.0	8	3	0.5	200	\$3177.00
SRL-10	10	1.0	8	3	1	50	\$3177.00
SRL-100	100	1.0	6	3	2	10	\$3177.00
SRL-1K	1K	1.0	6	2	10	5	\$3177.00
SRL-10K	10K	1.0	4	1.5	30	1	\$3177.00
SRL-100K	100K	1.0	6	2	100	-	\$3177.00
SRL-1M	1M	2	8	2	100	-	\$3177.00
SRL-10M	10M	4	9	3	200	-	\$3177.00



PHASE TESTER

Features:

- Testing phase orientation of 3-phase power sources ranging from 100 to 660 VAC
- Frequency range over 50 to 70 Hz
- Five LEDs indicate phase orientation (clockwise or counter-clockwise); & whether each of three phases is live
- Complete with 3 large alligator clips



Model	Description	Price
RT-606	3-Phase Tester	\$81.00

MOTOR ROTATION & PHASE TESTER

Features:

- Combines above 3-phase tester with a motor rotation tester for measuring the rotation direction of motor shafts
- Ensures motor is not damaged from incorrect wiring
- Complete with 3 large alligator clips



Model	Description	Price
RT-608	Phase & Motor Rotation Tester	\$187.00

PHASE TESTER

Features:

- Designed to check the presence of an open phase and also the phase sequence by rotating disks and lamps
- Can check a wide range of 3-phase power sources from 110V to 600V

Specifications:

Voltage:	110 to 600 VAC
Frequency Response:	50/60 Hz
Withstand Voltage:	2200 VAC for 1 minute
Safety Standard:	IEC61010-1 Cat. III 600V
Dimensions:	106 x 75 x 40mm
Weight:	350 g
Cord:	1.5m (R: red, S: white, T: blue)



Model	Description	Price
8031	Phase Tester	\$125.00

PHASE SEQUENCE/MOTOR ROTATION TESTER



This economical three-in-one test tool is a must for any plant maintenance staff and very quickly and easily will identify proper sequencing for three phase power. This is also an ideal tool for measuring the proper rotation of motors, conveyors, pumps and other electrical devices interconnected on the power line system before installation. This meter has been designed to IEC 1010 Safety requirements for Electronic Measuring Apparatus.

Features:

- Three functions in one unit:
 1. Phase rotation tester
 2. Motor rotation tester
 3. Open phase indication
- Fused phase rotation tester
- Battery operated (motor rotation)
- Meets IEC 1010, 600V Cat. III (EN61010) safety requirements
- Includes three 4-ft. leads with large alligator clips and soft carrying case

Specifications:

Input Voltage:	100 to 600 VAC max.
Frequency Range:	45 to 70 Hz
Input Protection:	A (black) & C (blue) phase rotation inputs fused at 0.2A/250V
Phase Motor Indication:	ABC or BAC
Motor Rotation Indication:	ABC or BAC
Open Phase Indication:	A, B, C
Power Supply:	9V alkaline battery
Dimensions:	6.02 x 2.83 x 1.37" (753 x 72 x 35mm)
Weight:	6.37 oz (182g)

Model	Description	Price
2121.04 PMR-1	Phase Sequence/Motor Rotation Tester	\$138.00

PHASE SEQUENCE/MOTOR ROTATION TESTER



Features:

- Identifies power line phase sequence and motor rotation
- Four bright LED indicators:
 - Normal (ABC) indicator (Green LED)
 - Reverse (BAC) indicator (Red LED)
 - Phase Loss indicator (Red LED)
 - Low Battery indicator (Yellow LED)
- Integrated, colour-coded test leads eliminate the need for test lead swapping (18" long)
- Compact design, extremely simple to use

Specifications:

Operating Voltage:	20 to 600 Vrms
Operating Frequency:	50/60/400 Hz
Isolation:	3000 VAC
Ambient Temperature:	-40 to 60°C (-40 to 140°F)
Power Supply:	Single 9V alkaline battery
Fuses:	2 x 0.5A @ 250V high interrupting
Dimensions:	95 x 67 x 38 mm (3.75" x 2.6" x 1.5")

Model	Description	Price
PRM-1	Phase Sequence/Motor Rotation Tester	\$174.00

ELECTRONIC TEST TOOLS

PY-1 High Voltage Tester

- AC Volts 115/220/277/400, DC Volts 125/300/400/600
- Automatically indicates voltage of circuit under test
- 4 neon bulb indicator lamps

Price \$10.00



PY-2 3-Wire Circuit Tester with G.F.C.I.

- Gives instant display of receptacle wiring condition for any standard 110V AC outlet
- Checks the condition of G.F.C.I. protected circuit
- UL approved

Price \$21.00



PY-3 3-Wire Circuit Tester

- Gives instant display of circuit condition for any standard 110V AC outlet
- UL approved

Price \$15.00



PY-5 Pen Type Voltage Tester

- AC 110/220/380V
- DC 150/300/500v
- LED indicators
- Dual insulated probes

Price \$13.00



AC-006 AC Line Splitter

- Enables clamp meter user to measure AC current on a 2-wire or 3-wire power cord to 15A
- Plugging the power connector into the line splitter separates the hot/ live conductor from the neutral and ground
- Provides safe measurements of current without the need to cut off the plug and separate the conductors
- Voltage check function

Price \$20.00



AD-1 Input Adapter

- Converts a type K probe with a mini connector to standard 3/4" banana jacks

Price \$12.00



VT201 Non-contact Voltage Detector

- Quickly check for the presence of AC voltages, with no electrical contact
- Safe detection of voltages from 70 to 440VAC
- Both visible and audible indicators
- Detector emits loud audible chirping
- Bright flashing LED
- Batteries included

Price \$16.00



ST101 Socket Tester

- Fast and easy socket test
- Easy-to-read light indicators
- Confirm proper wiring and operation of AC socket
- for use on 110-125 VAC

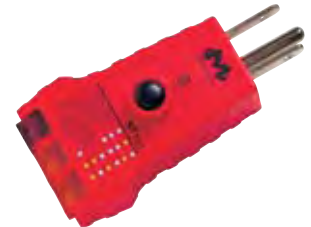
Price \$8.00



ST102 GFCI Socket Tester

- Test 110-125 VAC GFCI breakers for proper wiring and operation
- GFCI circuit trips to confirm tester is working

Price \$14.00



VT102 Voltage Tester

- 4 bright neon lights indicate AC voltage
- 4 ranges indicated from 110VAC to 460 VAC
- Tests 2-wire and 3-wire AC outlets

Price \$7.00



VT101 Voltage Tester

- Bright neon light indicates AC voltage
- Identify AC voltage from 90 to 500 VAC
- Tests 2-wire and 3-wire AC outlets

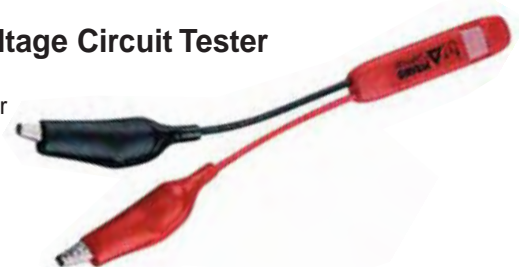
Price \$3.00



PY-10 Low Voltage Circuit Tester

- 9 to 50V AC/DC
- Insulated alligator clips
- Neon bulb indication

Price \$8.00



ENVIRONMENTAL TEST KIT

One compact, portable kit enables the measurement of all important environmental parameters.

Kit consists of:

Model K6010 Anemometer

Display: 18mm LCD, 4 digits
 Measurement: m/s, km/h, ft/min, mph
 Max., Min., Response Time (fast/slow)
 Ranges: 0.20 - 40.00 m/s, 40 - 7800 ft/min. and equivalent km/h, mph
 Power Supply: 006P DC 9V battery
 Dimensions: 200 x 70 x 36 mm

Model K7010 Sound Level Meter

Display: 18mm LCD, 3 1/2 digits
 Measurement: A & C weighting, Max., Data hold, Response (fast/slow) AC/DC output
 Ranges: A weighting: 30 to 130 dB
 C weighting: 30 to 130 dB
 Power Supply: 006P DC 9V battery
 Dimensions: 200 x 70 x 36 mm

Model K6020 Humidity/Temperature Meter

Display: 18 mm LCD, 3 1/2 digits
 Measurement: R.H., Temp (°C/ °F), Data hold
 Ranges: R.H. : 10% to 95% RH
 Temp.: 0° to 60°C/32° to 140°F
 Power Supply: 006P DC 9V battery
 Dimensions: 200 x 70 x 36 mm

Model K7020 Light Meter

Display: 13mm LCD, 3 1/2 digits
 Measurement: Lux, Ft-candle (Fc), Data hold, Analog/Digital output
 Ranges: Lux: 0 to 50,000 Lux (3 ranges)
 Ft-candle: 0 to 5000 Fc (3 ranges)
 Sensor Spectrum: Meets C.I.E. photopic
 Power Supply: 006P DC 9V battery
 Dimensions: 163 x 70 x 30 mm



Shipped in Model 1500C Protective Case

Applications:

- Measurement of all factors needed to evaluate the environment
- Establishment of acceptable conditions in office buildings, schools, hospitals, shopping malls, etc.
- Evaluation of the environment in aircraft's, trains, subways, buses and other transport vehicles
- Checking the effectiveness of the air conditioning and ventilation systems in buildings, vehicles, museums, libraries, theaters, etc.

Model	Description	Price
K100	Environmental Test Kit	\$1495.00

MAINTENANCE REPAIR KIT

The perfect kit for maintenance personnel. Measure a variety of parameters directly with your digital multimeter. Simply plug each adapter's banana jacks into your DMM and switch to 200mVDC range.

Kit consists of:

Model No. K5040 Digital Multimeter

Display: 18mm LCD, 3 1/2 digits
 Measurement: 40 ranges covering DCV, ACV, DCA (20A), ACA (20A), ohms, Hz, Temp., Capacitance, HFE, Diode, Continuity beeper
 Power Supply: 006P DC 9V battery
 Dimensions: 185 x 87 x 39 mm
 Accessories: Manual, Fuse, Test Lead

Model No. LS-139 Surface Probe

Sensor: Type K thermocouple
 Range: 900°C

Model No. TA-601 Tachometer Adapter

Range: 100 - 1,999 rpm; 1,000 - 19,990 rpm
 Accuracy: (±1.2% + 2 digits)

Model No. K1030 Light Adapter

Range: 0 - 50,000 Lux
 Accuracy: ±5%

Model No. K6030 Anemometer Adapter

Range: 40 - 7870 ft/min.
 Accuracy: ±2%



Model	Description	Price
K200	Maintenance Repair Kit	\$795.00

CABLE HEIGHT METERS



Features:

- Measure the height of overhead cables without using sticks
- Simple 3- to 5-button operation for fast effective measurements
- Accuracy to $\pm 0.1\%$
- No physical connection to cables or wires required to obtain a measurement
- Calibration-free and maintenance-free operation

This series of cable height meters measures the height of overhead cables and bridges up to 75 ft. At the push of a button, these hand-held instruments emit an ultrasonic sound to pinpoint the height of up to six overhead lines at a time. The transmitter emits short bursts of sound, then the microprocessor calculates the elapsed time for the sound to "bounce back" from the cable to the instrument. The built-in microprocessor compensates for temperature as detected by the unit's type K thermocouple.

These units are easy to use, so compact that you can carry them virtually anywhere -- and inherently safe, since no physical connections are required to test the overhead lines. You'll use them regularly for measuring the height of distribution, transmission, cable TV lines, and street lights. You'll also find them handy for determining cable sag from the lowest point to the ground or for determining the separation between the three lowest cables.

An optional dynamic target is recommended for horizontal measurements up to 150 feet (**5796C** only)

Specifications:

Models CHM2000 CHM600 CHM600E

MEASURING RANGES

	CHM2000	CHM600	CHM600E
Min. Cable Size:			
1" diameter	7-35 ft	7-50 ft	7-75 ft
1/2" diameter	7-35 ft	7-50 ft	7-75 ft
1/4" diameter	7-35 ft	7-50 ft	7-75 ft
1/8" diameter	7-35 ft	7-50 ft	7-75 ft
Horizontal Range:	-	-	-
Number of Lines:	1-6	1-6	1-6
Manual/Auto Temp.:	-	Yes	Yes
Dual Beam Switchable:	Yes	Yes	Yes
Feet/Meter Switchable:	Yes	Yes	Yes
Resolution:	0.250"	0.250"	0.250"
Accuracy:	0.1% rdg. \pm 1 dgt.		
Measuring Frequency:	40kHz		
Operating Temp.:	14 to 113°F (-10 to 45°C)		
Power Supply:	9V alkaline battery provides approx. 50,000 readings		
Dimensions:	3 x 4 x 8.5:		
Weight:	1.1 lb.		

Model	Description	Price
CHM2000	Cable Height Meter, 7 to 35 ft.	\$760.00
CHM600	Cable Height Meter, 7 to 50 ft.	\$860.00
CHM600E	Cable Height Meter, 7 to 75 ft.	\$960.00



CABLE TESTERS

Features:

- Test voltage combinations of 50V, 100V, 250V and 500V
- Insulation measurement to 20,000M Ω (20G Ω)
- Capacitance measurement to 4000nF
- Cable length measurement to 80.0km (264,000 ft.)
- Ideal for telecom testing and high sensitivity measurements
- Field kits include megohmmeter, two colour-coded leads (three for **Model 1035**), black test probe, two alligator clips (three for **Model 1035**), two grip probes, remote test probe, AC current probe (**Model 1039** kit only), batteries and user manual



Specifications:

Models	1035	1039
INSULATION TESTS		
Test Voltage:	50V, 100V, 250V, 500V	50V, 100V
Measurement Range:	10k Ω to 20,000M Ω (20G Ω)	
Short Circuit Current:		≤ 3 mA
Accuracy:	3% rdg. ± 5 cts. (<40M Ω); 3% rdg. ± 2 cts. (>40M Ω)	
Voltage Test:		0 to 600V AC/DC
Warning Voltage Indicator:		>25V
Test Inhibition:		Yes >25V
RESISTANCE TESTS		
Measurement Range:	0.0 to 400k Ω	0.0 to 40.0k Ω
Test Voltage :		7 to 9V
Accuracy:		3% rdg. ± 1 ct.
CURRENT TESTS		
Measurement Range:	-	0.00 to 400mA (240A) (w/ probe option)
CAPACITANCE/CABLE LENGTH		
Capacitance Range:	-	0.0 to 4000nF
Cable Length Range:	-	0.000 to 80.0km
VOLTAGE TESTS		
Measurement Range:	-	0 to 400 VAC
Accuracy:	-	3% rdg. ± 1 ct.



Model	Description	Price
2116.90	Model 1035 Cable Tester	\$835.00
2116.91	Model 1039 Cable Tester	\$975.00
2115.42	Model 1035 Cable Tester Field Kit	\$1114.00
2115.43	Model 1039 Cable Tester Field Kit	\$1379.00

Model	Description	Price
2115.73	AC Current Probe for use w/ Model 1039	\$125.00
2118.97	Remote Test Probe	\$222.00
2118.98	Waterproof Field Case	\$196.00
2118.99	Hands-free Carrying Case	\$74.00

CABLE TESTERS



Features Model 2127.80 FAULT MAPPER:

- Cable fault/length tester alphanumeric TDR
- Measure cable length up to 6000 feet
- Built-in library of most common cables and their VOP
- Manual selection of VOP for all cables not found in library
- VOP setting displayed along with length and type of cable
- Detects opens and shorts and the distance between them
- Large high visibility electroluminescent display

Features Model 2127.81 FAULT MAPPER PRO:

- Telephone cable tester graphical TDR
- Detects opens, shorts, taps, faulty taps, bridge taps, splitters, high resistance, water soaked and wet cables, splices and more
- Identifies impedance mismatches
- Indicates cable faults up to 10,000 feet
- Works with twisted pair, parallel and coaxial cable
- Selectable cable impedance (50, 75, 100Ω)
- Over-voltage protection up to 250V AC/DC
- Adjustable cursor assists in locating fault position
- Large high visibility electroluminescent display

Features Model 2127.82 WIRE MAPPER PRO:

- LAN cable tester
- Indicates all common wiring faults including split pairs, shorts, opens and reversed pairs
- Unique graphical and digital display of fault information
- Indicates distances to open and short circuit faults and identifies when at end
- Built-in tone generator for tracing cables
- Built-in service check function to detect 10 Base T, 100 Base T, telephone and token ring
- Visual and audible warning of live network voltages
- Works with Category 6 cables
- Rugged palm-top design weighs less than 12 oz.
- Large high visibility electroluminescent display
- Complete with remote unit and mini patch leads
- Up to 16 unique remote office identifiers available
- Works with TIA 568A/B, USOC and ISDN wiring schemes

Model	Description	Price
2127.80	Model CA7024 Cable Fault/Length Tester	\$725.00

Model	Description	Price
2127.81	Model CA7026 Telephone Cable Tester	\$1237.00

Model	Description	Price
2127.82	Model CA7028 LAN Cable Tester	\$725.00

CABLE TESTERS

Features Model 8200-24A:

- Designed to solve and prevent cable and wire installation problems
- Tests coaxial (RG6, RG59 for CATV/ CCTV) and all twisted cable (UTP, STP, SSTP) and troubleshoots other wiring like speaker wires, security networks or telephone cabling
- Patented TDR technology ensures accurate length measurements, including individual pair lengths to the hub
- Checks end-to-end continuity on all four-wire pairs and correct termination (wiremap)
- Locates opens, shorts, crossed pairs, split pairs and miswires
- Identifies active networking 10 Base-T/100 Base-T hubs
- Flashes hub light to help identify pairs
- Generates four unique tones for locating cables hidden in walls, ceilings, or wall closets
- Identifies half or full duplex capability
- Enables patch cable testing without couplers or external adapters

Specifications:

- Applications: Shielded (STP) and UTP cable; 75 or 50Ω coaxial cable; 10BaseT or 10/100 Base-T networks
- Main Tester Interface: Modular 8 connector for length, 10/100 link identification, wire map, office identifier, toner; loopback interface: module 8 connector used for patch cable wiremap
- Length Measurement: Measures length on all 4 pairs and displays in feet or meters; max. length 1500 ft. (457m)
- Length Accuracy: ±4% or 4 feet
- Length Calibration: User selectable NVP (calculation based on known cable length and maximum length)
- Toner Interface: Main Mod8 port for tone generation on all 4 pairs. Ground jack provided for grounding during trace operations.
- Input Protection: Test interface withstands input hazard conditions that arise from normal telephone interfaces (48 VDC) or 24 VAC
- Power Supply: 9V alkaline battery
- Dimensions: 5.5 x 3.25 x 1" (140 x 82.5 x 25.4mm)
- Weight: 6 oz. (170g)

Features Model 8200-49A:

- Verify the integrity of twisted-pair cabling in one quick step
- Indicates opens, shorts, crossed, reversed and split pairs
- Easy-to-read fault display
- Remote unit enables one-person testing of installed cables
- Remote unit slides into master unit for convenient and safe storage
- Built-in tone generator allows you to trace cable through walls, floors, and ceilings when used with the IntelliTone Probe
- Automatic sleep mode
- Low battery LED

Specifications:

- Connectors: RJ45 jack
- Cable Length Test: Min.: 2 ft. (0.6m); Max.: 656 ft. (200m)
- Length Measurement: Measures length on all 4 pairs and displays in feet or meters; max. length 1500 ft. (457m)
- Power Supply: 6V alkaline battery
- Dimensions: 4.93 x 2.05 x 1.18" (125 x 52 x 30mm)
- Weight: 4 oz. (113g)



Model 8200-24A



Model 8200-49A



Model 8200-51A



Model 8200-53A

Features Model 8200-51A:

- Includes IntelliTone 100 Toner, coax F connector adapter, RJ11 and RJ45 patch cables, test leads w/ alligator clips, lanyard and 9V battery
- Verifies continuity, pair condition, line polarity and voltage in network cabling systems and modular telephone lines
- Flashes hub and switch port lights to help locate cables in a busy wiring closet

Specifications:

- Power Supply: 9V alkaline battery
- Dimensions: 4.53 x 2.49 x 1.03" (115 x 63 x 26mm)
- Weight: 6.7 oz. (190g)

Features Model 8200-53A:

- Includes IntelliTone 100 Probe, lanyard and 9V battery
- Use with any tone generator
- Locates cables hidden in floors, ceilings, wall and bundles without damaging cable insulation
- Adjustable volume control and LED for noisy environments

Specifications:

- Power Supply: 9V alkaline battery
- Dimensions: 8.07 x 1.42 x 1.42" (205 x 36 x 36mm)
- Weight: 4 oz. (110g)

Model	Description	Price
8200-24A	MicroScanner™ Pro Network Tester	\$928.00
8200-49A	MicroMapper™ Cable Tester	\$200.00
8200-51A	IntelliTone 100 Toner	\$122.00
8200-53A	IntelliTone 100 Probe	\$122.00
8200-50A	IntelliTone 100 Toner & Probe Kit	\$215.00

LAN CABLE TESTER

The PairMaster gives its user the ability to verify and test basic LAN cabling installations. This unique LAN Cable Test Set can identify one of up to 16 pairs with the press of a button. The PairMaster will also check for 8 faults, including:

- Overvoltage
- Open Pair
- Shorted Pair
- Crossed Pair
- Split Pair
- Reversed Pair
- Transposed Pair
- Double Split Pair (NEXT)

Features:

- Flush power button reduces accidental turn-on
- Tests Cat. 5, 5E and Cat. 6 cables
- Identifies one of 16 cable pairs
- Tests 1/2, 3/6, 4/5, 7/8 cable pairs
- 2-digit, 7-segment LED displays fault codes and remote ID numbers
- Input protection up to 56VDC
- Overvoltage indication on PairMaster and remote identifiers
- Low battery indication
- Auto power off at end of test
- Four PASS LEDs (green), four FAIL LEDs (red)
- EIA/TIA 568 configuration for UTP Ethernet and token ring LAN cables

Functions:

WIRE-MAPPING

The Pairmaster will check point to point wiring, commonly referred to as wire-mapping. This tells the user whether or not the cable pairs, 1/2, 3/6, 4/5, 7/8, are wired correctly at both ends. Green LEDs indicate Pass, red LEDs indicate Fail. If a fault is detected, the corresponding fault code is displayed.

NEAR END CROSSTALK (NEXT)

The Near End Crosstalk feature checks for excessive AC coupling between each pair in a cable.

CABLE IDENTIFICATION

The Pairmaster can also identify a LAN cable within a bundle. By connecting up to 16 available Remote Identifiers to the workstation wall jacks, the PairMaster will identify and display the number of the Remote Identifier connected to the cable.

REMOTE IDENTIFIER

The Remote Identifier properly terminates the LAN cable when connected to the workstation wall jacks. It contains the necessary circuitry to allow the PairMaster to verify proper wiring within the cable. Each of 16 Remote Identifiers has an overvoltage LED which lights to indicate the presence of damaging voltage.



The PairMaster Test Set includes:

- 2 - Remote Identifiers, #1 and #2
- 1 - RJ-45 Patch Cable (Cat. 5)
- 2 - RJ-45 In-line Couplers
- 1 - 9-volt battery
- 1 - Instruction manual

The PairMaster Kit includes:

- 1 - PairMaster Test Set
- 16 - Remote Identifiers, #1 thru #16
- 1 - RJ-45 Patch Cable (Cat. 5)
- 2 - RJ-45 In-line Couplers
- 1 - 9-volt battery
- 1 - Hard carrying case
- 1 - Instruction manual

Model	Description	Price
3240	PairMaster LAN Cable Test Set	\$316.00
3241	PairMaster Kit LAN Cable Testing Kit	\$450.00

LAN CABLE TESTER



Features:

- Verifies point-to-point wiring of RJ-45 patch cables
- 8 LEDs identify the destination of each conductor in cable
- Checks for continuity in straight-through wiring
- Uses one standard 9V alkaline battery (not included)
- Economical and simple to use

Model	Description	Price
3251	WireMaster RJ-45 LAN Cable Tester	\$69.00

LAN CABLE TESTER



Features:

- Tests five types of cables: RJ-45, RJ-11, BNC, 1394, USB
- Tests installed wiring or patched cables
- Tests shields in 1394 and USB cables
- Tests shielded (STP) or unshielded (UTP) LAN cables
- Simple one-button operation
- Remote attaches to main unit
- 600-ft. test distance (RJ-45/RJ-11/BNC)
- Built-in battery test
- LEDs indicate connections and faults
- Beeper provides audible announcement of test results

The WireMaster XR-5 checks for:

- Continuity
- Miswiring
- Opens
- Shorts
- Crossover
- Grounding

The WireMaster XR-5 includes:

- BNC terminator
- BNC, RJ-11 and RJ-45 jumper cables
- Padded carrying case
- 9-volt battery
- Instruction manual

Model	Description	Price
3260	WireMaster XR-5 LAN 5-Cable Tester	\$199.00

LAN CABLE TESTER



Features:

- Verifies point-to-point wiring of twisted pair LAN cables, telephone cables, and other types of cables that use RJ-45 and RJ-11 connectors
- "Local Mode" allows for testing of patch cables
- Tests LAN crossover and telephone patch cables
- Checks continuity in cable conductors
- Generates two distinct warble tones usable for cable tracing
- Checks "straight-through", "reverse wired", and "crossover" patch cables
- 8 LEDs identify the source and destination of each conductor
- Direct connection of 6-pin RJ-11 or 8-pin RJ-45 cables
- Allows remote testing of long cable runs up to 1000 feet
- User selectable features:
 - RJ-11 4-conductor or 6-conductor test
 - Forward or Reverse sequencing on transmitter
 - High or Low pitch tracer tone
 - Fast or Slow LED sequencing
 - Local or Remote test mode on receiver
- Telco protected
- Vinyl carrying case included
- Uses standard 9V alkaline battery (not included)

Model	Description	Price
3254	WireMaster XR-2 LAN Cable Test Set	\$149.00

TONE GENERATOR



Features:

- “TrueTrace” means cadence of tracer tone changes when pair is momentarily shorted, allowing for definite ID of target wire pair
- Cordless phone interface allows user to use a standard cordless phone for hands-free “TrueTrace”
- “Trip-Latch” is a unique latch testing technique using “True-Trace” for testing alarm systems

- Three methods of connectivity:
 - RJ-11 plug for tracing telephone lines
 - RJ-45 jack for tracing LAN cables (trace BNC cables with optional RJ-45 to BNC adapter)
 - Alligator clips for connection to stripped wires or terminal panels
- Overload protected with 120VAC line cross protection on all functions
- Overload warning beeper alerts user to potential hazards
- Warble/Pulse Tracer Tone - Selectable tone for audible and visual ID using **Hound** or **Hound 2** Probe Inductive Tracer
- High output tracer tone
- Generates 2 of 6 user selectable tracer tones
- Internal user selectable settings: HI/LO pitch shift, Warble/Continuous tracer tone, On/Off audio pilot tone, On/Off cadence shift
- Tone/Battery LED indicates that Tracer Tone is on and battery is OK
- Audio Pilot Tone confirms Tracer Tone signal
- Visual and audible continuity test
- Red/Green telephone line polarity LEDs also indicates AC/Ring signal
- Supplies “TalkPower” to allow communicating between handsets or powering a telephone
- Line powered in Tone Mode
- Built-in telephone ringer
- “Power Latch” prevents accidental turn-ons maximizing battery life
- Magnetic back means you can stick the **Fox 2** to steel surfaces
- Works with either **Hound** or **Hound 2** Probe Inductive Tester
- Powered by standard 9V alkaline battery (not included)

Model	Description	Price
3382	Fox 2 Tone Generator w/ “TrueTrace”	\$76.00

TONE GENERATORS



Features Model Fox:

- Generates 3 distinct tones usable for wiring tracing
- Performs a variety of tests on telephone lines
- Line powered in Tone Mode
- LED indicator for continuity
- Supplies “Talk Power” to allows communicating between handsets or powering a telephone
- Alligator clips and modular plug allow for connection to stripped wires, telephone panels, or a standard modular jack (single line)
- Powered by a standard 9V battery (not included)

Features Model LAN Fox:

- Designed for use with LAN cables
- Generates 2 distinct tones for LAN cable tracing
- Direct connection of standard RJ-45 modular plugs
- RJ-45 to BNC adapter allows for tracing of BNC cables
- Works with either **Hound** or **Hound 2** Probe Inductive Tracer
- Powered by a standard 9V battery (not included)

Model	Description	Price
3380	Fox Tone Generator	\$52.00
3243	LAN Fox Tone Generator	\$57.00

INDUCTIVE TRACERS



Features Model Hound:

- Contains a high gain, high impedance amplifier
- Capable of identifying the **Fox's** tone up to 12" away
- Use with **Fox 2**, **Fox**, **LAN Fox**, or **WireMaster XR-2** for quick and efficient wire tracing
- Rugged, moisture resistant, mylar cone speaker
- Compact design
- Powered by standard 9V battery (not included)

Features Model Hound 2:

- Streamlined design allows for better access in those hard-to-reach areas
- Adjustable volume control
- LED light intensifies as the signal gets stronger
- Contains a high gain, high impedance amplifier
- Capable of identifying the **Fox's** tone up to 12" away
- Use with **Fox 2**, **Fox**, **LAN Fox**, or **WireMaster XR-2** for quick and efficient wire tracing
- Rugged, moisture resistant, mylar cone speaker
- Powered by standard 9V battery (not included)

Model	Description	Price
3390	Hound Inductive Tracer	\$92.00
3236	Hound 2 Inductive Tracer Probe	\$109.00

INDUCTIVE TRACER KITS

Model 3395-K includes:

- **Fox 2** Deluxe Tone Generator
- **Hound 2** Probe Inductive Tracer
- Carrying Case



Model 3248-K includes:

- **LAN Fox** Tone Generator
- **Hound 2** Probe Inductive Tracer
- RJ-45 to BNC Adapter
- Carrying Case



Model 3385-K includes :

- **Fox** Tone Generator
- **Hound** Inductive Tracer
- Carrying Case



Model 3245-K includes:

- **Fox** Tone Generator
- **Hound 2** Probe Inductive Tracer
- Carrying Case



Model 3249-K includes:

- **LAN Fox** Tone Generator
- **Hound** Inductive Tracer
- RJ-45 to BNC Adapter
- Carrying Case



Model	Description	Price
3395-K	Fox 2 & Hound 2 Kit	\$178.00
3385-K	Fox & Hound Kit	\$154.00
3245-K	Fox & Hound 2 Kit	\$154.00
3248-K	LAN Fox & Hound 2 Kit	\$158.00
3249-K	LAN Fox & Hound Kit	\$158.00

LAN CABLE TESTER



Features:

- Intelligent LAN cable tester
- Cable length up to 10 km
- Connectors: RJ-45 & RJ-11 with key
- 3 LED bars indicate testing status
- Includes main unit and remote unit
- Operated by a single 9V alkaline battery

Model	Description	Price
LAN-922	LAN Cable Tester	\$139.00

WIRE TRACERS



Specifications:

Transmitter Voltage: 9 to 600V AC/DC
 Operating Frequency: 32.786 Hz
 Receiver Short Range: 20' in air from traced wire under test conditions
 Receiver Open Range: 20' in air from traced wire under test conditions

Model	AT-4001	AT-4003	AT-4004	AT-4005
Carrying Case	Soft SV-1000	Hard CC-AT-4000	Hard CC-AT-4000	Hard CC-AT-4000
Receiver R-4000	•	•	•	•
Transmitter T-4000	•	•	•	•
Pigtail-Banana Plug Cord Set C2901	•	•	•	•
Alligator Clip-Banana Plug Cord Set C902	•	•	•	•
Grounding Test Lead 25 ft. MTL-G	•	•	•	•
Alligator Clip for Ground Lead VRC-320	•	•	•	•
Clamp-on Transmitter Accessory A2202			•	•
Rechargeable Battery Pack B2024				•
Battery Pack Recharger B2025				•
Price	\$1077.00	\$1216.00	\$1520.00	\$1824.00

Features Model ATGC-1:

- Accessory for T2200 Transmitter
- Traces and locates buried conductors like main electrical feeds, water mains and telephone lines
- Eliminates direct connection of transmitter
- No access to the conductor required

Model	Description	Price
ATGC-1	Ground Coil Accessory	\$452.00

Features:

- Extremely easy to use
- One universal transmitter automatically switches to work with either energized or non-energized systems
- Receiver is not position sensitive and does not need to be rotated in order to provide accurate readings
- Traces live wires buried or hidden behind walls
- Traces energized and non-energized (open, broken) wires
- Performs test without having to interrupt power
- Locates breakers, neutrals, and ground lines
- Locates and traces wires in walls, floors, conduit, computer cables, etc.
- Pinpoints shorts, ground faults and broken wires
- Does not interfere with sensitive electronic equipment
- Battery booster strengthens signal for open tracing
- Clamp-on attachment injects signal for non-contact operation

CABLE TRACING SYSTEM

A modular, multi-purpose system designed for virtually every cable and circuit tracing task.



Model AT-2004 Cable Tracing System includes receiver, load signal generator, transmitter, clamp-on transmitter accessory, cordsets and adapter. All components are fully fused, protected and intrinsically safe; and fit into a foam-lined carrying case that includes condensed operating instructions in its lid.

Model R2000 Receiver has two detectors in its tip which are tuned to pick up the electromagnetic signals ('short' mode) or electrostatic signals ('open' mode) generated by other components. The LEDs and sensitivity settings indicate the relative signal strength to allow easy detection of the signal source.

Model S2600 Load Signal Generator, when connected to an energized line, will draw a rapidly fluctuating current pulse from the source, causing the power line to emit an electromagnetic signal which is detected by the **R2000 Receiver** in the 'short' mode. These devices allow tracing of line-side conductors without power interruption or interference.

The **T2200 Transmitter** injects a signal into an unenergized conductor. If the conductor is broken (open), no current will flow, so the signal is present as a voltage pulse, which is detected along the conductor's length by the **R2000's** electrostatic detector ('open' mode). The signal will stop at the open.

When the **A2201 Inductive Clamp** is clamped around the energized line and plugged into the **T2200 Transmitter**, it will induce a signal onto the downstream (load) side to enable identification of equipment on that circuit.

Applications:

- Trace conductors buried up to 13 feet
- Trace and identify load-side equipment from the circuit breaker while energized
- Trace line-side wiring without power interruption on circuits from 9 to 600 Volts AC or DC
- Trace open wires for over a mile
- Trace wire in conduit, or even the conduit itself
- Locate ground faults and shorts
- Identify individual wires in a bundle

Specifications:

R2000 RECEIVER

Detectors:	Electromagnetic coil pickup for short mode; Electrostatic plate pickup for open mode
Sensitivity:	Switchable x1, x10, x100 coarse gain adjustment with 0 - 10 fine adjustment
Short Mode Performance:	>20' in air under test conditions
Open Mode Performance:	>12' in air under test conditions
60 Hz Rejection:	120 dB
Display:	10 LEDs with chroma filter lens
Power Supply:	9V alkaline battery

S2600 LOAD SIGNAL GENERATOR

Operating Voltage:	9 - 600 VAC or VDC
Operating Frequency:	32.768 kHz
Duty Cycle:	Transmits two pulses with a duration of 0.0625 each every 0.5 secs.
Current Output:	Low mode: 35 mA peak, 4 mA avg.; High mode: 70 mA peak, 6 mA avg.
Fuse:	Fast acting 250 mA @ 660 V

T2200 TRANSMITTER

Operating Frequency:	32.768 kHz
Duty Cycle:	Transmits two pulses with a duration of 0.0625 each every 0.5 secs.
Signal Output:	9 V supply 24 V supply
High Setting:	1 A, 31 V 3 A, 105V
Med Setting:	1.8 A, 13 V 6 A, 45 V
Low Setting:	3 A, 6.5 V 10 A, 22 V
Fuse:	Fast acting 2 A @ 250 V 3AG, 1/4" x 1 1/4"
Power Supply:	9V alkaline battery; 24V jack will accept battery pack (B2024 or B2025)

A2201 CLAMP-ON TRANSMITTER ACCESSORY

Operating Frequency:	32.768 kHz supplied by T2200 Transmitter
Case Breakdown Voltage:	3000 V
Max. Wire Size:	2000 MCM or 2" dia. cable
Power Supply:	Powered from T2200 Transmitter

GENERAL SYSTEM

Operating Temperature:	0 - 120°F (-17.8 - 48.9°C)
Dimensions (HWD):	4" x 15.5" x 11" (10.2 x 39.4 x 27.9cm)
Weight:	4 lbs. 5 oz. (1.95 kg)

Model	Description	Price
AT-2004	Cable Tracing System	\$1550.00
B2024	24V Nicd Rechargeable Battery Booster	\$310.00
B2025	Recharger/Converter, 115VAC/24VDC	\$92.00

CIRCUIT TRACER

Easy-to-read displays for instant indications, plus clear audio indicators.

Case-cover-mounted operating information adds convenience.

Receiver auto off conserves batteries.



Rugged housings stand up to years of hard use.

No need for power interruption.

Easy circuit tracing, with no knobs or switches to set.

Our best circuit tracing system is expressly designed to save pros time. With its integrated Circuit Seeker microprocessor power, it requires minimal set up; and its transmitter automatically indicates open, live, or shorted line mode. Complete kit includes transmitter, receiver, and accessories in a handy carrying case.

Features:

- Traces circuits in both metallic and nonmetallic conduit
- Finds breaks in wires and shorts to ground
- Incorporates auto gain circuitry for enhanced accuracy
- Locates and identifies blown fuses
- Supports transmitter-to-receiver distances up to 4 miles (6.5km) for closed circuit tracing

Accessories included:

- Adapter lead
- AC blades
- Extension lead
- Earphone/tube
- (2) 9V batteries
- Instruction video
- Carrying case

Specifications:

Capacity:	0-600V AC/DC
Auto Off:	Transmitter, 30 min.; Receiver, selectable
Case Dimensions:	14 x 12 x 4 (355 x 305 x 102mm)
Weight:	3.56 lbs. (1615g)
Distance:	3000 ft. to 4 mi. (varies with application)

Model	Description	Price
2011	Circuit Seeker™ Circuit Tracer	\$827.00

BURIED WIRE/PIPE LOCATOR



Features:

- Locates underground energized and de-energized wires, cables and pipes
- Three testing modes
- Depth measurement
- Audible indicator with loudspeaker
- Eliminates exploratory digging in parking lots or under floors for buried pipes and wires
- Allows user to pinpoint path of underground traced object
- Weatherproof and drop resistant
- Each unit includes receiver, transmitter, connection cable, ground stake and ground cable

OPTIONAL SIGNAL CLAMP MODEL SC-3000

- Used to induce tracing signal to pipes, wires or cables
- Accommodates cables and wires up to 4" in diameter
- Does not require direct connection to bare metal of wire

OPTIONAL MOUSE TRANSMITTER MODEL M-3000

- Used to pinpoint places in pipes, ducts, etc.
- Accommodates pipes over 2" in diameter

Model	Description	Price
AT-3000	Buried Wire/Pipe Locator Kit	\$4052.00
SC-3000	Signal Clamp	\$968.00
M-3000	Mouse Transmitter	\$1546.00

METAL DETECTOR

Features:

- Only two knobs and a pushbutton for simple operation
- Ground Effect Rejection VLF eliminates annoying or false signals from wet ground foliage, pavement or mineralized ground
- Identifies metallic objects by speaker sound and needle movement
- High Sensitivity for maximum penetration through soil, asphalt or concrete
- Pushbutton tuning
- Built-in battery test
- Shaft length is adjustable and locks in position
- Fully waterproof search coil
- Ultra-slow Auto-tune to stabilize ground tuning and minimize frequency drift

Specifications:

Operating Frequency:	4.5 kHz 5
Sensitivity:	0.2mV RMS for full scale
Sensitivity Adjustment:	12:1
Output Indication:	Meter: 1mA, 0-100 linear scale Speaker: 16Ω impedance Headset: 8Ω impedance Audio Frequency: 450 kHz
Power Supply:	±9V supplies; (12) 1.5V AA batteries in (2) 6-battery packs
Battery Life:	Alkaline: 100+ hours; Carbon Zinc: 35-45 hours
Power Consumption:	13.8 mA
Dimensions:	40 to 54" adjustable (101 to 137cm)
Weight:	w/ 8" coil: 3.7 lbs (1.7 kg); w/ 11" coil: 4.3 lbs (1.9 kg)

The **M-97** Valve, Pedestal and Box Locator is specifically designed for finding buried or paved-over valves, boxes or vaults. It also locates buried survey markers, water or gas meters, conduit, manholes and other metal objects. Pushbutton tuning makes for quick and easy maintenance of the meter level and the "threshold" level of the sound. The "threshold" level is a low tone heard during normal operation when the **M-97** is correctly tuned to existing ground and temperature conditions. Pushbutton tuning also allows the operator to "detune" the **M-97** for pinpointing the location of buried or covered metallic objects. Special auto-tune circuitry provides a continual, but very gradual, retuning of the **M-97** operating frequency to counteract any drift caused by temperature and humidity changes.



Model	Description	Price
M-97	Valve, Pedestal and Box Locator	\$1001.00
203622-700	11" dia. Search Coil	\$189.00
972095	Stereo Headphones	\$66.00
103693	Vinyl Carrying Bag	\$59.00
202767	Hard Carrying Case w/foam liner & keylock	\$205.00

LINE TRACER

Features:

- Trace pipes and cables with digital accuracy
- Audio and visual response for left-right direction guidance
- Push-button for depth readout in inches or cm
- Automatic gain control
- Digital signal strength
- Inductive or conductive tracing
- Rugged, splash-proof construction



Specifications:

RECEIVER

Sensitivity Control:	Automatic (AGC)
Dynamic Range:	110 dB
Depth Range:	to 16 ft. (488 cm)
Readout Units:	Inches or cm (specify)
Depth Accuracy:	±8% under normal conditions
Trace Accuracy:	±1 inch to 4-ft. depth; ±2% over 4 ft.
Audio Output:	Continuous/pulse VCO output through speaker or optional headphones
Visual Display:	LCD provides left-right directional information, signal strength readout (numeric and bar graph), and depth in inches or cm

Power supply:	6 x alkaline "C" cell batteries
Battery Life:	60 -80 hours continuous

TRANSMITTER

Frequency:	82.175 kHz ±0.001%
Output Power:	500 mW: 10Ω to 3kΩ load 500 mW: 200Ω to 1kΩ load
Power Supply:	2 x 6V lantern batteries
Battery Life:	25 - 35 hours continuous

Model	Description	Price
TW-7700	Digital Reading Line Tracer	\$4078.00
203400	Coupling Clamp	\$326.00
972095	Headphones	\$66.00

PIPE & CABLE LOCATOR

The **TW-6** locates underground metal objects such as pipes, cables, manhole covers, vaults and valve boxes. It features a substantial increase in sensitivity over earlier models. That is why transmitter and receiver as well as the individual carrying handles are now held together with very durable, completely non-metallic catches. Aluminum loop antennas of previous versions have been replaced by actual coil windings around the edge of the underside of the face panels on the transmitter and receiver. This change has boosted the tracing performance 50 to 100%.

Conductive Tracing

Conductive tracing is the preferred method of tracing because the transmitter makes a direct physical hook-up with the line to be traced. The included ground plate assembly plugs into the transmitter with one wire going to an alligator clamp to be attached to the pipe, non-energized wire, or conduit. This concentrates the signal on the known line to be traced and there is less chance of the signal being induced to a nearby or adjacent line to cause confusion. Tracing distances are increased 25 - 50% over the inductive methods. Non-metallic pipes may be traced conductively as the ground plate assembly is attached to a plumber's "snake" or electrician's "fish tape" running inside the pipe.

Inductive Locating

Using a four foot handle, you have the transmitter behind you and the receiver ahead, while walking a pattern to discover buried metal objects. The locations become known from meter movement and speaker sound.

Inductive Tracing

When one point is known on a linear conductor such as a pipe or cable, the transmitter portion of the **TW-6** can be placed over it and tracing can go in either direction from the point. You then walk out the path of the line and "wag" the receiver left and right over the line. At a distance from the transmitter, the signal will become faint but the transmitter can be brought up to that point so tracing can continue to the end of the line.



The **TW-6** will be primarily used by water departments, telephone companies, electric power companies, gas companies and petroleum pipeline companies to know where to dig, and sometimes more importantly where *not* to dig in making repairs or rearranging buried lines.

Model	Description	Price
TW-6	Pipe and Cable Locator	\$1117.00
201809	Carrying Case	\$135.00
972095	Stereo Headphones	\$66.00
202727	3-piece Handle Kit	\$205.00
203400	Coupling Clamp	\$326.00
202295	Tracer Probe	\$326.00
202248	Battery Recharge Kit	\$163.00

MAGNETIC LOCATOR



Specifications:

Display: Numeric digital LCD, analog bar graph
 Overall Length: 42" (106.6 cm)
 Sensor Spacing: 20" (50.8 cm) for maximum sensitivity
 Power Supply: 6 x "AA" 1.5V alkaline batteries
 Battery Life: 100 hours of intermittent use
 Weight: Approx. 3lbs. (1.3 kg) w/batteries

The **Magna-Trak 100** Magnetic Locator is a flux-gate type magnetometer that finds underground ferrous metal fast by sensing magnetic field gradients. The target object may be detected at a considerable distance depending on its mass. As the detector approaches the target, the pitch of the audio signal will rise. The pitch will peak loudest when the locator is directly over the center of the buried object. Peak signal performance is unaffected by ground minerals. It is ideal for detecting well casings, cast iron water and gas lines, valve boxes, masonry nails, manhole covers, surveyor's markers, iron pipes and PK nails.

The lightweight **Magna-Trak 100** features simple push-button operation and easy-grip design. Its housing is made of high impact plastic, making the unit electrically non-conductive as well as water resistant and durable. An LCD visual indicator gives you a digital and bar graph display, in addition to the audio tone. This enhances pinpoint accuracy, especially in congested areas. Locator comes complete with soft case and 5-year warranty.

Model	Description	Price
19-550	Magnetic Locator	\$1157.00

REBAR LOCATOR

Features:

- Detects all metals
- Accurately pinpoints rebars
- Visual and audio indications
- Pre-set ground effect rejection
- Quick tune - ready for operation in seconds
- Fully submersible search loop
- VLF with synchro-detection (pre-set)
- Detects intersections of rebar or mesh
- Operates on universally available batteries
- Rugged construction

Detects:

- Reinforcing bar
- Wall studs
- Conduits
- Pipes
- PK nails
- Wiring
- Anything metallic

Specifications:

Operating Frequency of Loop:	4.5 kHz
Sensitivity:	0.2 mV RMS for full scale
Sensitivity Adjustment Range:	12:1
Output Indication:	1 mA, 0-100 linear scale
Speaker Impedance:	16Ω
Headset Impedance:	16Ω
Audio Frequency:	450 Hz
Power Supply:	±9V, each consists of 6 x 1.5V "AA" batteries (12 batteries total) Alternate 2 x 9V NEDA 1604 (w/ reduced battery life)
Power Consumption:	4 mA minimum to 10 mA Sound threshold, 112 mA max.
Search Loop Configuration:	Double D



Model 100 Metal Probe represents the most advanced state-of-the-art instrument employed for precisely locating metal objects in non-metallic structures. Very Low Frequency (VLF) operation combined with Synchro-Detection provides ultra sensitivity and maximum penetration.

Advantages of the **Model 100** are savings in time, money, material, equipment and manpower. Ease of operation is matched by ease of learning, lightweight portability, and the ability to precisely locate and define metal objects even in two-inch rebar mesh. Operation can be learned in minutes by personnel of all skill levels.

Model	Description	Price
M-101	Rebar Locator & Metal Probe w/ body mount & handle pole	\$894.00
201809	Deluxe Carrying Case	\$135.00

METAL/VOLTAGE DETECTOR



This tool helps prevent accidents when drilling, sawing and probing by detecting unseen hazards in walls, floors and ceilings. The Metal Sensor will find and trace "hidden" metal wiring, metal gas and water pipes, nails, screws, reinforcing bars, metal studs and other similar metals in walls. The red lamp lights and a continuous buzzer sounds when the unit senses metal.

The Power Sensor traces and finds breaks in exposed AC wiring, outlets, extension cords, switches and more without direct contact with wiring. Use to check that power has been disconnected before working on wiring or to test fuses in holder without unplugging. Light and buzzer warn of potential danger.

Requires one 9V transistor battery (included). Measuring only 5.88" x 3.25" x 1.13" and weighing just 4.2 oz., this detector can go everywhere you need to be.

Model	Description	Price
PF-2A	Metal/Voltage Detector	\$45.00

BATTERY CONDUCTANCE TESTER

Features:

- Tests the state-of-health of 6V and 12V sealed lead-acid batteries
- Utilizes patented conductance technology, a passive method that minimizes technician risk and battery stress
- Conductance method recognized by IEEE standard for the testing of lead acid batteries with proven correlation to battery capacity
- Battery voltage and conductance displayed in less than 10 seconds
- Includes specialized clamps designed for use with 0.187 tab terminal batteries, as well as a wide variety of other post/terminal types
- Helps ensure the operation of critical systems despite power loss
- Prioritizes battery replacements and additional testing for cost effective system management
- No external power source needed

Specifications:

Operating Range: 6V and 12V nominal batteries from 1.2 to 25Ah in capacity
 Voltmeter: +6.0 to +14.0 VDC
 Conductance: 20 to 600 siemens



Model	Description	Price
SCP-100	Battery Conductance Tester	\$363.00

BATTERY ANALYZERS



Features:

MODEL CTS-400XL

- For accurately testing CCA-rated starting battering in generator applications
- Provides specialized test algorithms for accurate testing
- Choose from algorithms for standard or spiral design
- Provides test decision and voltage
- Reverse polarity notification
- Also tests batteries in fleet truck applications

MODEL CTS-700

- Multiple battery test algorithm and test memory for a fast and easy analysis of multiple battery systems connected in parallel, series, or series-parallel configurations
- Advanced heavy-duty battery test algorithm designed for decisiveness and accurate testing of heavy-duty batteries and packs up to 3500 CCA
- Interactive starting and charging system test algorithm for both 12V and 24V system analysis
- Test memory and printing provide a complete record in seconds including multiple battery tests
- Includes time-saving quick test making preventative maintenance a reality
- Tests 6V and 12V commercial batteries from 100-1700 CCA
- Tests 1 to 4 batteries in parallel as a pack or individually
- Tests discharged batteries down to 1V
- Gives a decision, no user interpretation required
- Utilizes patented conductance test technology
- Includes 15' dual conductor Kelvin clamps

Specifications:

Operating Range: **CTS-400XL:** 100 to 1700 CCA;
CTS-700: 6V & 12V batteries, 100 to 1700 CCA; 12V & 24V battery systems, 100 to 3500 CCA
 Voltmeter: **CTS-400XL:** 0.9 to 30 VDC @ ±0.5 VDC;
CTS-700: 0.9 to 32 VDC, ±0.5 VDC
 Power Supply: Uses power of battery under test or replaceable 9V battery
 Dimensions: 9 x 4 x 2.5" (230 x 102 x 65mm)
 Weight: 16 oz (427g)

Model	Description	Price
CTS-400XL	Generator/Starting Battery Analyzer	\$839.00
CTS-700	Generator/Starting Battery Analyzer	\$1119.00

BATTERY ANALYZER

Features:

- Measures individual cell and overall string health and voltage
- Consistent, repeatable on-line testing without discharge to batteries
- Tests 2V, 6V and 12V lead-acid batteries on-line or off-line
- 2000 Ah testing capability
- Provides advanced warning of potential battery failures
- Tests each cell in under 10 seconds and entire string in just minutes
- Helps prioritize battery replacements for more cost effective system management
- Tests both battery cell and intercell strap integrity
- Enhanced backlit display and screen resolution
- Auto-calibration prior to every test
- User programmable functions: low voltage alarm setting; low conductance warning; low conductance failure
- Menu driven test sequence
- Stores 480 consecutive test results and overall string statistics
- Quick reset for erroneous test entries
- Portable IR wireless printing and data transfer
- New inForm™ software
- No external power source needed
- **Model CTE-1100CA** includes: protective carrying case; Mueller cable clamps; spare fuses; 9V battery and probe tips
- **Model CTE-1600CA** includes: everything that comes with **CTE-1100CA**; infrared PC data receiver and inFORM software



Specifications:

Voltage Range:	1.0 to 15.0 VDC
Conductance:	100 to 9,990 siemens
Accuracy:	±2% across test range
Voltmeter Resolution:	10 mVDC
Overvoltage Protection:	Fuse protected to 16 VDC
Power Supply:	9V Lithium battery
Dimensions:	9 x 4 x 2.5" (230 x 102 x 65mm)
Weight:	1 lb (500g)

Model	Description	Price
CTE-1100CA	Stationary Battery String Analyzer	\$3494.00
CTE-1600CA	Stationary Battery String Analyzer Kit	\$3860.00

BATTERY ANALYZER

Features:

- Measures individual cell and overall string health and voltage
- Consistent, repeatable on-line testing without discharge to batteries
- Tests 2V through 16V batteries on-line or off-line
- Provides advanced warning of potential battery failures
- Tests each cell in under 10 seconds
- Helps prioritize battery replacements for more cost effective system management
- Tests both battery cell and intercell strap integrity
- Auto-calibration prior to every test
- User programmable functions: preset values for over 250 battery types; low voltage alarm setting; low conductance warning
- Voltage measurement to 3 decimal places
- Reduced testing time
- 16V testing capability
- Tests double straps and 8 posts
- High ampere-hour testing capability
- Export/Print/Delete "all strings"
- New inForm™ software
- 16 internal memory registers capable of storing 480 consecutive test results and overall string statistics
- User definable battery reference number storage and fault thresholds
- Voltage logging only option
- Quick reset for erroneous test entries
- Portable IR wireless printing and data transfer
- **Model CTA-4000** includes: Protective boot; rechargeable battery pack; infrared PC data receiver and software; infrared printer; infrared temperature sensor; protective carrying case; clamp and probe cables; spare fuses; printer paper; 9V batteries; and probe tips



Specifications:

Voltage Range:	1.0 to 20 VDC
Conductance:	100 to 19,990 siemens
Accuracy:	±2% across test range
Voltmeter Resolution:	5 mVDC
Overvoltage Protection:	Fuse protected to 16 VDC
Power Supply:	9.6V, 1600mAh rechargeable battery
Dimensions:	9 x 4 x 2.5" (230 x 102 x 65mm)
Weight:	2 lb (907g)

Model	Description	Price
CTA-2000	Stationary Battery String Analyzer	\$6084.00
CTA-4000	Stationary Battery String Analyzer Kit	\$6993.00