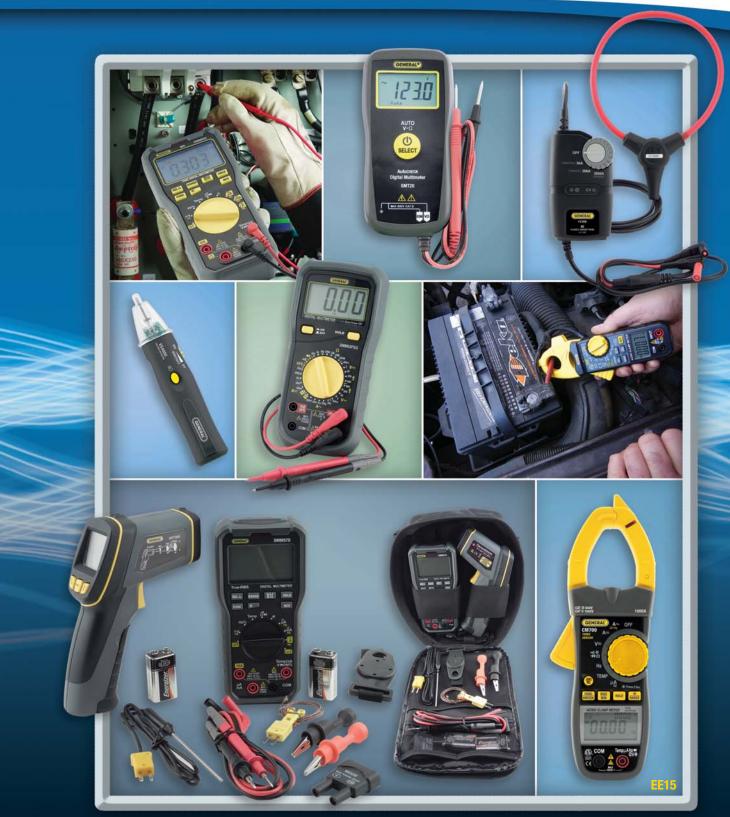


# **ELECTRICAL INSTRUMENTS 2015**



Test Equipment
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# Clamp Meter Comparison Chart

Modern clamp meters combine a voltmeter and an ammeter. **Because the** ammeter responds to voltages induced by flows in the conductor within its jaws, clamp meters can measure larger currents than a multimeter and in a safer way.









CM380 (see page 7)

DAMP60 (see page 6)

KEY FEATURES & SPECIFICATIONS COMPARISON					
Model No.	CM700/CM660	CMR35A CMR35T + CMR35R	CM380	DAMP68	DAMP60
Figure of Merit	16 Functions, 50 Ranges (CM700) 16 Functions, 49 Ranges (CM660)	8 Functions, 27 Ranges	11 Functions, 38 Ranges	11 Functions, 31 Ranges	7 Functions, 19 Ranges
Safety Rating	CAT III 600V. CAT II 1000V	CAT III 600V	CAT III 600V	CAT III 600V	CAT III 600V
Safety Listing (ETL, UL, CE)	ETL, CE	CE	ETL, CE	CE	CE
Parameters Measured	AC/DC current, AC/DC voltage, resistance, frequency, continuity, diode integrity, capacitance, temperature, duty cycle	AC/DC current, AC/DC voltage, resistance, frequency, continuity, diode integrity	AC/DC current, AC/DC voltage, resistance, frequency, capacitance, temperature, continuity, diode integrity, duty cycle	AC/DC current, AC/DC voltage, resistance, frequency, continuity, diode integrity, capacitance, temperature	AC current, AC/DC voltage, resistance, frequency, continuity, diode integrity
True RMS Measurements?	Yes	Yes	No	Yes	No
Wireless?	No	Yes	No	No	No
AC Current Range	0 to 1000A (CM700) 0 to 600A (CM660)	0 to 600A	0 to 80A	0 to 400A	0 to 600A
DC Current Range	0 to 1000A (CM700) 0 to 600A (CM660)	0 to 600A	0 to 80A	0 to 400A	N/A
AC/DC Voltage Range	0 to 1000V	0 to 600V	0 to 600V	0 to 600V	0 to 600V
Max Count/Max Current & Voltage Resolutions	6000/0.1A (CM700), 0.1mV 6000/0.01A (CM660), 0.1mV	4000/0.1A, 0.1mV	4000/1mA, 0.1mV	4000/0.1A, 0.1mV	2000/0.1A, 0.1mV
Resistance Range	0 to 60MΩ	0 to 40MΩ	0 to 40MΩ	0 to 40MΩ	0 to 20MΩ
Frequency Range	10 to 1000Hz using clamp jaw; 10Hz to 60MHz using test leads	0 to 10kHz	10Hz to 10MHz through test leads; 40Hz to 10kHz through clamp jaw	0 to 9.999MHz	10 to 1999Hz
Capacitance Range	0 to 60,000μF	N/A	0 to 40,000μF	0 to 4000μF	N/A
Temperature Range (via "K" type thermocouple)	-58° to 1112°F (-50° to 600°C)	N/A	-4° to 1832°F (-20° to 1000°C)	-40° to 752°F (-40° to 400°C)	N/A
NCV Detection Ranges	12 to 25VAC, 70 to 125VAC, 150 to 240VAC, 250 to 600VAC	N/A	70 to 125VAC	N/A	N/A
Clamp Jaw Type, Opening	Coil type + Hall effect, 1.65 in. (42mm)	Coil Type + Hall effect, 1.18 in. (30mm)	Coil-type, 0.95 in. (24mm)	Coil Type + Hall effect, 1.48 in. (37.5mm)	Coil-type, 1.48 in. (37.5mm)
Analog Bar Graph?	Yes	No	No	Yes	N/A
Ranging Options	Auto or manual	Auto or manual	Auto or manual	Auto or manual	Autoranging only
Zero Offset?	Yes	Yes	Yes	Yes	N/A
Data Hold?	Yes	Yes	Yes	Yes	Yes
Memory	Min, Max session values	Min, Max session values	No	No	Max session value
Duty Cycle Range	1 to 99%	N/A	0.5 to 99.5%	N/A	N/A
Weight	12.4 oz. (350g)	Transmitter: 8.85 oz. (251g); Receiver: 6.24 oz. (177g)	7.6 oz. (215g)	19 oz. (539g)	17 oz. (482g)
Power Source	3 "AAA" batteries (included)	2 "AA" batteries each (or external 3VDC/10mA supply) for transmitter and receiver	3 "AAA" batteries (included)	3 "AAA" batteries (included)	2 "AAA" batteries (included)

# **AC/DC True RMS Clamp Meters with NCV**







## RUGGED AUTO RANGING AC/DC TRUE RMS CLAMP METERS WITH

- CM660: 0 TO 600A RANGE, 0.01A MAX RESOLUTION
- CM700: 0 TO 1000A RANGE, 0.1A MAX RESOLUTION

Ideal for electricians, HVAC/R contractors, building maintenance professionals and maintenance/repair/operations (MRO) technicians

- 16 functions, 49 ranges
- Measures temperature from -58° to 1112°F (-50° to 600°C) using included "K" type stem thermocouple
- · Uses beeper to verify integrity of diodes and check circuits for continuity
- 0 to 200µA and 2000µA AC/DC ranges for measuring flame rod current with 0.1 µA and 1µA resolution using included test leads
- Built-in Non-Contact Voltage (NCV) detector with four sensitivity settings & audible and visual alerts
- · Large backlit digital LCD with two 6000-count readouts for simultaneous display of real-time current or voltage on primary readout and line frequency on secondary readout
- · Fast-response analog bar graph
- Bright LED work light
- Auto and Manual ranging and MIN/MAX options
- Data HOLD and REL (zero) buttons
- INRUSH mode for measuring surge current during motor startup
- 1.65 in. (42mm) jaw opening (largest in its class) for conductors up to 550 MCM resists
- · Rugged housing can withstand multiple drops onto concrete from height of 5 ft. (1.6m)
- ETL certified CAT III 600V, CAT II 1000V



#### **SPECIFICATIONS:**

- ♦ AC Voltage Ranges / Accuracy: 0 to 600mV/6V/60V/600V/1000V / ±(0.8% + 3 digits)
- ◆ DC Voltage Ranges / Accuracy: 0 to 600mV/6V/60V/600V/1000V /  $\pm (0.5\% + 3 \text{ digits})$
- ♦ AC Current Ranges / Accuracy: 0 to 60A/600A (CM660), 0 to 60A/600A/1000A  $(CM700) / \pm (1.8\% + 5 counts)$
- ◆ DC Current Ranges (via clamp) / Accuracy: 0 to 60A/600A (CM660), 0 to 60A/600A/1000A  $(CM700) / \pm (3\% + 5 \text{ digits})$
- ♦ AC/DC Current Ranges (True RMS, in microamp mode) / Accuracy: 0 to 200µA/2000µA /  $\pm$ (1% of reading + 5 digits)
- ♦ Resistance Ranges / Accuracy: 0 to  $600\Omega/6k\Omega/60k\Omega/600k\Omega/6M\Omega/60M\Omega$  /  $\pm (0.8\% + 3 \text{ digits}) < 1M\Omega$ ;  $\pm (1.2\% \text{ of reading})$ + 3 digits) ≥1MΩ
- ♦ Frequency Ranges / Accuracy: 10Hz to 60Hz/600Hz/6kHz (clamp jaw); 10Hz to 60Hz/600Hz/6kHz/60kHz/600kHz/6MHz/60MHz (test leads)  $/ \pm (1.5\% + 5 \text{ digits})$  (clamp jaw);  $\pm (0.3\% + 5 \text{ digits})$  (test leads in Hz mode)
- ◆ Capacitance Ranges / Accuracy: 0 to 6nF/60nF/600nF/6µF/600µF/  $6000\mu\text{F}/60,000\mu\text{F}/\pm(4\% + 5 \text{ digits}) > 10\text{nF}$
- ◆ Temperature Range (via "K" type thermocouple) / Accuracy: -58° to 1112°F (-50° to 600°C) /  $\pm (2\% + 2 \text{ digits})$
- ♦ Duty Cycle Range / Accuracy: 1 to 99% / ±3%
- ♦ Maximum Resolutions: 0.01A (CM660), 0.1A (CM700), 0.1µA (in micoamp mode), 0.1mV,  $0.1\Omega$ , 0.01Hz, 0.001nF, 2°F/1°C, 0.1%
- ♦ Clamp Jaw Opening: 1.65 in. (42mm)
- ♦ Dimensions: 8.86 x 3.31 x 1.30 in. / (225 x 84 x 33mm)
- ♦ Weight (including batteries): 14.8 oz. (420g)
- ♦ Power Source (included): Three "AAA" batteries

- · Double-Insulated Test Leads with Screw-On **Alligator Clips**
- "K" Type Stem Thermocouple Probe and Plug Adaptor
- Batteries
- Soft Pouch
- · User's Manual
- 3-Year Limited Warranty

	•
UPC	NO.
01629 9	CM660
01633 6	CM700
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. 7)



# Data Logging AC/DC Clamp Meter System

# WIRELESS TRUE RMS CAT III 600V CLAMP METER/DATA LOGGING SYSTEM – CMR35A, CMR35T, CMR35R

C E F©

Ideal for process/power plant operators, HVAC/R contractors, building maintenance technicians.

#### **FEATURES:**

- 8 Functions, 27 Ranges
- Measures AC/DC current, AC/DC voltage, resistance and frequency
- · Also checks for continuity and diode integrity
- True RMS measurements
- Designed to meet CAT III 600 safety standard
- Collects data from up to six clamp meters/transmitters (available as options) operating on different channels
- · Software displays four windows: A main monitor (dashboard), separate tabular and graphic displays of up to six logs, and a running estimate of monitored equipment's power cost
- · Excel-formatted software facilitates USB data transfers to PC for storage and display
- . Wireless range of up to 333 ft. (100m) with no obstructions
- Min/Max memory + data hold
- . Hi and Lo audible alarms for voltage and current level
- Adjustable transmission span (extends battery life)
- Clamp meter also operates in standalone mode
- Standard USB computer interface

#### **SPECIFICATIONS:**

CMR35A 912.4MHz Wireless System with One Clamp Meter-Transmitter and **One Data Logging Receiver-Controller** CMR35T 910MHz Wireless Clamp Meter-**Transmitter** 

#### **CMR35R 910MHz Wireless Controller Data Logging Receiver-Controllerr:**

- ♦ Wireless Range: Up to 333 ft. (100m) with no obstructions
- ♦ Sampling Rate: 3x/sec (not transmitting); 1x/sec (transmitting)
- ♦ Operating Temperature/Humidity: 14° to 122°F (-10° to 50°C)/80% R.H. max
- ♦ LCD Size (Transmitter): 1.77(H) x 1.04(W) in. (45 x 26.5mm)
- ♦ LCD Size (Receiver): 2.05(H) x 1.14(W) in. (52 x 29mm)
- ♦ Jaw Opening: 30mm (1.18 in.)

- ♦ Voltage Measurement Range/Accuracy: 0 to 600V (AC or DC)  $\pm$  (0.75% of reading + 3 digits)
- ♦ Voltage Measurement Resolution: 0.001V
- ♦ Current Measurement Range/Accuracy: 0 to 600A (AC or DC)  $\pm$ (1% of reading + 5 digits)
- ♦ Resistance Measurement Range: 0 to 40MΩ
- ♦ Frequency Measurement Range: 0 to 100kHz
- ♦ Transmission Span: 2, 10, 30, 60 or 120 seconds (user-selectable)
- ♦ Input Impedance:  $10M\Omega$
- ♦ Dimensions (Transmitter): 8.66(L) x 2.52(W) x 1.38(H) in. (220 x 64 x 35mm)
- ♦ Dimensions (Receiver): 7.05(L) x 2.83(W) x 1.26(H) in. (179 x 72 x 32mm)
- ♦ Weight (Transmitter): 8.85 oz. (251g)
- ♦ Weight (Receiver): 6.24 oz. (177g)
- ♦ Power Source (Transmitter & Receiver): 2 "AA" batteries or external 3VDC supply @ 10 mA

#### **INCLUDES:**

- · Custom hard plastic carrying case (CMR35A only)
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01448 6	CMR35A (912.4MHz)
01487 5	CMR35T (910MHz)
01488 2	CMR35R (910MHz)
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. 7)









CMR35T







# AC/DC and AC True RMS Clamp Meters



#### AUTO RANGING AC/DC TRUE RMS 400 AMP CLAMP METER – DAMP68

Ideal for HVAC/R technicians. Also measures capacitance, frequency and temperature.

#### **FFATURES**

- 11 functions, 34 ranges
- Measures temperature from -40° to 752°F (-40° to 400°C) using included "K" type thermocouple
- Computes and displays True RMS values
- Verifies integrity of diodes and checks circuits for continuity
- Jumbo 3-3/4 digit (4000 count) backlit LCD + analog bar graph
- Ergonomic design with rugged rubber housing
- · Hall effect clamp jaw
- Auto and Manual ranging and MIN/MAX display options
- Data HOLD and REL (zero) buttons
- Safe for CAT III 600V use
- CE approved

#### **SPECIFICATIONS:**

- ♦ AC Current Measurement Range / Accuracy: 0 to 400A / ±(3% + 10 digits)
- ◆ DC Current Range (via clamp) / Accuracy: 0 to 400A / ±(3% + 5 digits)
- ◆ AC Voltage Ranges / Accuracy: 0 to 400mV/4V/40V/400V/600V / ±(2% + 10 digits) or better
- DC Voltage Ranges / Accuracy: 0 to 400mV/4V/40V/400V/600V / ±(0.8% + 5 digits)
- Resistance Ranges / Accuracy:
   to 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ /
   ±(2% + 5 digits) or better

- Frequency Ranges / Accuracy: 0 to 100Hz/1kHz/ 10kHz/100kHz/1Mhz/10MHz / ±2%
- Capacitance Ranges / Accuracy:
   0 to 40nF/400nF/4μF/40μF/400μF/4000μF / ±(4% + 5 digits)
- ◆ Temperature Range (via "K" type thermocouple) / Accuracy: 40° to 752°F (-40° to 400°C) ±(1.2% + 6 digits) from 32° to 212°F
- ♦ Maximum Resolutions: 0.1A, 0.1mV, 0.1Ω, 0.01Hz, 0.01nF, 1°
- ♦ Clamp Jaw Type / Opening: Coil-Type + Hall effect / 1.48 in. (37.5mm)
- ◆ Dimensions: 11.38 x 6.25 x 2.75 in. / (289 x 159 x 70mm)
- ♦ Weight: 19 oz. (539g)
- ♦ Power Source: 3 "AAA" batteries (included)

#### INCLUDES:

- "K" Type Stem Thermocouple Probe
- Test Leads
- Soft Carrying Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01369 4	DAMP68
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. 7)



#### **AUTO RANGING 600 AMP CLAMP METER - DAMP60**

Ideal for general-purpose work.

#### **FEATURES:**

- 7 functions, 19 ranges
- Verifies integrity of diodes and checks circuits for continuity
- Jumbo 3-1/2 digit (2000 count) backlit LCD
- Ergonomic design with rugged rubber housing
- Coil-type clamp jaw
- Autoranging and MAX display options
- Data HOLD and REL (zero) buttons
- Safe for CAT III 600V use
- · CE approved

#### **SPECIFICATIONS:**

- ♦ AC Current Measurement Ranges/Accuracy: 0 to 200A/600A / ±(3% + 5 digits)
- ♦ AC Voltage Ranges / Accuracy: 0 to 2V/20V/200V/600V / ±(1% + 5 digits)
- DC Voltage Ranges / Accuracy:
   0 to 200mV/2V/20V/200V/600V / ±(0.8% + 5 digits)
- ♦ Resistance Ranges / Accuracy: 0 to 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ / ±(2% + 5 digits) or better
- ♦ Frequency Range / Accuracy: 10 to 1999Hz / ±(3% + 10 digits)

- Max Resolutions: 0.1A, 0.1mV, 0.1Ω, 1Hz
- ◆ Clamp Jaw Type / Opening: Coil type / 1.48 in. (37.5mm)
- ♦ Dimensions: 11.25 x 6.13 x 2.75 in. / (286 x 156 x 70mm)
- ♦ Weight: 17 oz. (482g)
- ♦ Power Source:
- 2 "AAA" batteries (included)

#### **INCLUDES:**

- Test Leads
- Soft Carrying Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01356 4	DAMP60
01521 6	ACL10 15A Line Splitter (optional)
01639 8	<b>FX3000</b> 3000 Amp Flex Clamp Adaptor (optional, see p. 7)



# 80 Amp AC/DC Clamp Meter & Accessories

#### 80 AMP AC/DC CLAMP METER WITH NCV DETECTION - CM380

#### Ideal for troubleshooting automotive and process control systems.

#### FEATURES:

- 11 functions, 38 ranges
- Measures AC/DC current, AC/DC voltage, resistance, frequency (through the clamp or test leads), capacitance and duty cycle
- Also measures temperature via included "K" type bead thermocouple probe
- · Also checks for continuity and diode integrity
- 0.1mV and 1mA maximum resolutions
- · Clamp jaw sized for automotive electrical
- Auto or manual ranging
- ETL approved for CAT III 600V use
- Backlit 4000-count LCD with 0.5 in. (13mm)
- · Built-in non-contact voltage (NCV) detector
- · Built-in LED work light

#### **SPECIFICATIONS:**

- ♦ Range / Accuracy / Max. Resolution
  - AC/DC Current: 0 to 80A / ±2.5% / 1mA
  - AC/DC Voltage: 0 to 600V / ±1% / 0.1mV
  - Resistance: 0 to  $40M\Omega$  /  $\pm 0.8\%$  /  $0.1\Omega$
  - Frequency: 10Hz to 10MHz /  $\pm$ 0.5% typical / 0.001Hz
  - Capacitance: 0 to 40mF / ±4% / 0.001nF
  - Temperature: -4° to 1832°F (-20° to 1000°C)/ ±3% / 1°

- ♦ Clamp Jaw Opening: 0.95 in. (24mm)
- ♦ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Dimensions: 8.19 x 3.07 x 1.38 in. (208×78×35mm)
- ♦ Weight (including batteries): 7.6 oz. (215g)
- ◆ Power Source: 3 "AAA" batteries (included)

#### **INCLUDES:**

- Meter
- · Double-insulated test leads with screw-on alligator clips
- . "K" type bead thermocouple probe and plug adaptor
- Batteries
- · Soft pouch
- · User's manual
- · 3 year limited warranty

UPC	NO.
01684 8	CM380
	NISTCM380
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. 7)







#### **3000 AMP FLEX CLAMP ADAPTOR - FX3000**

FX3000 enables any clamp meter or multimeter to enclose thick or hard-to-reach conductors while increasing its AC current measurement range to up to 3000A.

#### **FEATURES & SPECIFICATIONS:**

- Three Ranges: 0 to 3000A (full-scale), 0 to 300A, 0 to 30A
- Output: 1mVAC/A in 3000A range; 10mVAC/A in 300A range; 100mVAC/A in 30A range
- Accuracy: ±1% of full-scale value
- Position Error: ±1% @ 1 in. from conductor; ±2% @ 2 in.: ±3% a@ 3 in.
- Safety Rating: CAT III 1000V, CAT IV 600V (probe); CAT II 1000V, CAT III 600V (converter)
- Probe Length: 18 in. 458mm); creates 6 in. diameter loop
- Cable Length (probe to converter): 6 ft. (1.8m)
- Input Impedance: 10kΩ, minimum
- Power Source: (2) "AAA" batteries (included)
- 1-Year Limited Warranty

UPC	NO.
01639 8	FX3000



#### **15A AC LINE SPLITTER - ACL10**

Makes it possible to attach a clamp meter to a line carrying up to 15 AC Amps without separating its conductors.

#### **FEATURES:**

- Two clamp positions/sensitivities: x1 for direct readings; x10 for low-current measurements
- Includes voltage check outlet

#### **SPECIFICATIONS:**

- ♦ Maximum Line Voltage/Current: 120 VAC/15 Amps
- ♦ Clamp Jaw Opening: 1.0 x 1.0 in.

UPC	NO.
01521 6	ACL10



ACL<sub>10</sub>



# **Multimeter Comparison Chart**

General puts the "Multi" in "Multimeter" with advanced features such as true RMS measurement, microamp ranges and non-contact voltage (NCV) detection













(see	page	10)
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(see page 10)

(see page 11)

(see page 11)

(see page 13)

(see page 12)

	(See page 10)	(See page 10)	(See page 11)	(See page 11)	(See page 15)	(See page 12)
Model #	DMM570	DMM550	DMM45	DMM40	DMM52F8G DMM53F8G	DMM30
Name	Rugged True RMS Multimeter with NCV Detection & Lo-Z Mode	Rugged True RMS Multimeter with NCV Detection	Auto Ranging CAT III 600V Digital Multimeter	Manual Ranging CAT III 600V Digital Multimeter	Rugged Service Multimeters	8-Function Digital Multimeter with NCV Detection
Figure of Merit	19 functions, 48 ranges	18 functions, 48 ranges	8 functions, 25 ranges	6 functions, 19 ranges	8 functions, 31 ranges (DMM52FSG); 11 functions, 32 ranges (DMM53FSG)	8 functions, 21 ranges
Parameters Measured	AC/DC voltage, AC/DC current, resistance, capacitance, frequency, duty cycle, continuity, diode integrity	AC/DC voltage, AC/DC current, resistance, capacitance, frequency, duty cycle, continuity, diode integrity	AC/DC voltage AC/DC current, resistance, diode integrity	AC/DC voltage, DC current, resistance, diode integrity	AC/DC voltage, AC/DC current, resistance, continuity, diode integrity, bipolar transistor forward current gain (hFE). DMM53FSG also measures capacitance, frequency, and temperature.	AC/DC voltage, DC current, resistance, continuity, diode integrity, battery voltage
Ranging Options	Auto/Manual	Auto/Manual	Auto	Manual	Manual	Manual
Voltage Range	0 to 1000VDC/750VAC (True RMS)	0 to 1000VDC/750VAC (True RMS)	0 to 500VAC/VDC	0 to 500VAC/VDC	0 to 500VAC/VDC	0 to 600VAC/VDC
Maximum Voltage Resolution	10μV	10μV	0.5mV	0.5mV	100μV (DMM52FSG); 1mV (DMM53FSG)	100μV
DC Voltage Accuracy	±0.8% or better	±0.8% or better	±0.5%	±1.2%	±0.5%	±1%
Overvoltage Protection Level	1000V	1000V	600V	600V	1000V	250VAC/DC
Safety Rating	CAT III 1000V CAT IV 600V	CAT III 1000V CAT IV 600V	CAT III 600V	CAT III 600V	CAT III 600V	CAT II 600V
Safety Listing (ETL,UL,CE)	CE & ETL	CE & ETL	CE	CE	CE & ETL	CE
Current Measurement Range	0 to 10A AC/DC	0 to 10A AC/DC	0 to 200mA AC/DC	0 to 200mA AC/DC	0 to 10A AC/DC	0 to 10ADC
Micro Amp Range(s)	0 to 660μA AC/DC	0 to 400μA AC/DC	0 to 200μA and 0 to 2000μA AC/DC	0 to 200μA and 0 to 2000μA DC	0 to 20μA and 0 to 200μA DC (DMM52FSG); 0 to 20μA DC (DMM52FSG)	N/A
Non-contact Voltage (NCV) Detection Range	>110VAC	>110VAC	N/A	N/A	N/A	>110VAC
Resistance Range	0 to 66MΩ	0 to 40MΩ	0 to $20M\Omega$	0 to 2MΩ	0 to 200MΩ	0 to 2MΩ
Capacitance Range	0.001μF to 60,000μF	0.001μF to 40,000μF	N/A	N/A	0 to 100μF (DMM53FSG only)	N/A
Display	Backlit 3-3/4 digit (6,600 count) dual readout LCD	Backlit 3-1/2 digit (4,000 count) dual readout LCD	Backlit 3-1/2 digit (2,000 count) LCD	Backliit 3-1/2 digit (2,000 count) LCD	Backliit 3-1/2 digit (2,000 count) LCD	3-1/2 digit (2000 count) LCD
Display Options	Hold, Max, Min, Rel (Zero)	Hold, Max, Min, Rel (Zero)	Hold	Hold	Hold	Hold
Auto Power Off	Yes (30 minutes)	Yes (30 minutes)	No	No	Yes (25 minutes)	No
Limited Warranty Term	3 years	3 years	1 year	1 year	1 year	3 years
Other Features	Also measures temperature from 32° to 1832°F (0° to 1000°C) with included "K" type probe, 66-segment analog bar graph, IP54 water/dust/oil protection, 6 ft. drop-resistant, Lo-Z mode avoids detection of "ghost" AC voltages	Also measures temperature from 32" to 1832"F (0" to 1000"C) with included "K" type stem thermocouple probe, 40-segment analog bar graph, IP54 water/dust/oil protection, 6 ft. drop-resistant	Also measures temperature from -40° to 752°F with included "K" type thermocouple		DMM53FSG also measures frequency, and temperature from -4" to 1832°F (-20" to 1000°C). DMM53FSG includes "K" type probe with -40" to 500°F (-40" to 260°C) range	Protected by 250V/10A and 250V/250mA ceramic fuses



# **Multimeter Comparison Chart**











(see page 12)

(see page 12)

(see page 13)

(see page 13)

	(See page 12)		(See page 12)	(See page 10)	(see page 15)
Model #	DMM20	SMT20	DMM333	DMM830HS	AM35UL
Name	Digital Multimeter	Smart Multimeter	Digital Credit Card Style Multimeter	Economy Digital Multimeter	Analog Multimeter
Figure of Merit	7 functions, 20 ranges	7 functions, 24 ranges	7 functions, 25 ranges	7 functions, 20 ranges	4 functions, 13 ranges
Parameters Measured	AC/DC voltage, DC current, resistance, continuity, diode integrity, battery voltage	AC/DC voltage, resistance, frequency, capacitance, continuity	AC/DC voltage, AC/DC current, resistance, continuity, diode integrity	AC/DC voltage, DC current, resistance, continuity, diode integrity, bipolar transistor forward current gain (hFE)	AC/DC voltage, DC current, resistance
Ranging Options	Manual	Auto	Auto	Manual	Manual
Voltage Range	0 to 600VAC/VDC	0 to 600VAC/VDC	0 to 500VAC/VDC	0 to 750VAC/1000VDC	0 to 500VAC/VDC
Maximum Voltage Resolution	100μV	1mV	0.5mV	0.5mV	100mV
DC Voltage Accuracy	±1% or better	±0.8%	±0.5%	±1.2%	±2.5%
Overvoltage Protection Level	250VAC/VDC	250VAC/VDC	1000VDC, 750VAC	1000VAC/DC	500VAC/VDC
Safety Rating	CAT II 600V	CAT II 600V	CAT II 500V CAT III 300V	CAT II 500V	CAT II 500V
Safety Listing (ETL,UL,CE)	CE & ETL	CE & ETL	CE	CE	UL
Current Measurement Range	0 to 10A DC	N/A	0 to 200mA AC/DC	0 to 10A DC	0 to 250mA DC
Micro Amp Range(s)	N/A	N/A	0 to 200μA/2000μA AC/DC	0 to 200μA DC	0 to 500μA DC
Non-contact Voltage (NCV) Detection Range	N/A	50 to 600VAC	N/A	N/A	N/A
Resistance Range	0 to 2MΩ	0 to 20MΩ	0 to 20MΩ	0 to $2M\Omega$	0 to 1MΩ
Capacitance Range	N/A	0 to 100μF	N/A	N/A	N/A
Display	3-1/2 digit (2,000 count) LCD	3-5/6 digit (6,000 count)	3-1/2 digit (2,000 count) LCD	3-1/2 digit (2,000 count) LCD	Analog readout
Display Options	N/A	N/A	Hold, Max	N/A	N/A
Auto Power Off	No	Yes (15 minutes)	Yes (15 minutes)	No	No
Limited Warranty Term	1 year	1 year	1 year	1 year	1 year
Other Features	Protected by 250V/10A and 250V/250mA ceramic fuses			Single-pole ACV test	

# **Rugged True RMS Multimeters**



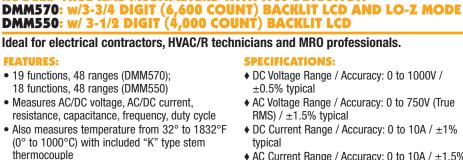




**DMM570** 



DMM550 N



RUGGED TRUE RMS MULTIMETERS WITH NCV DETECTION

· Checks continuity and diode integrity

• True RMS measurements

• IP54 water/dust/oil protection

• 6 ft. (1.8m) drop-resistant

• Designed to meet CAT III 1000V, CAT IV 600V safety standard

Auto or manual ranging

• Non-contact voltage (NCV) detection

 Lo-Z (low-impedance) mode: avoids "ahost" AC voltage readings due to capacitive coupling of voltage from power supply conductors onto adjacent unused conductors (DMM570 only)

 Fast-response analog bar graph at bottom of LCD: 66 segments (DMM570), 40 segments (DMM550)

• Hold, Max, Min, Rel (Zero) display options

• Auto Power Off (can be disabled)

• Magnetic hanging strap (DMM570 only)

CE approved

ETL certified

3-year limited warranty



◆ DC Voltage Range / Accuracy: 0 to 1000V /

♦ AC Voltage Range / Accuracy: 0 to 750V (True

◆ DC Current Range / Accuracy: 0 to 10A / ±1%

♦ AC Current Range / Accuracy: 0 to 10A / ±1.5% typical

♦ Resistance Range / Accuracy: 0 to 66MΩ (DMM570), 0 to  $40M\Omega$  (DMM550) /  $\pm 0.8\%$ 

♦ Frequency Range / Accuracy: 0 to 66MHz (DMM570), 0 to 40MHz (DMM550) / ±1.5%

♦ Capacitance Range / Accuracy: 0 to 66mF (DMM570), 0 to 40mF (DMM550) / ±3%

♦ Temperature Range / Accuracy: 32° to 1832°F (0° to 1000°C) / ±1%

◆ Duty Cycle Range / Accuracy: 10 to 95% / ±2%

♦ NCV Detection Range: >110VAC

♦ Overload Protection Level in Voltage and Current Modes: 1000V

♦ Overload Protection Level in Resistance, Frequency, Continuity, Diode Integrity and Capacitance Modes; 250VAC/DC<sub>RMS</sub>

♦ Input Impedance: 10MΩ in all modes (except  $\dot{400}$ k $\Omega$  in DMM570 Lo-Z mode)

♦ Auto Power Off Trigger: 15 minutes of frontpanel inactivity

♦ Operating Temperature: 32° to 104°F (0° to 40°C)

♦ Dimensions: 6.9 x 3.3 x 2.1 in. (176 x 84 x 54mm)

♦ Weight: 13.4 oz. (380g)

♦ Power Source: 1 "9V" battery (included)

• "K" Type Stem Thermocouple Probe

• Adaptor for thermocouples with spade lugs

• CAT III 1000V/10A Rated Test Leads with **Alligator Clips** 

• Magnetic Meter Hanging Strap (DMM570 only)

· Cloth Pouch with Belt Loop

Battery

User's Manual

• 3-Year Limited Warranty

UPC	NO.
01683 1	DMM550
	NISTDMM550
016428	DMM570
	NISTDMM570
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. 7)











## **CAT III 600V & Smart Multimeters**

#### **AUTO RANGING CAT III 600V DIGITAL MULTIMETER – DMM45**

Ideal for measuring AC/DC voltage, AC/DC current, resistance and temperature.

#### **FEATURES:**

- 8 functions, 25 ranges
- Measures 1) AC voltage, 2) DC voltage, 3) DC current, 4) AC current, 5) resistance, 6) temperature using included "K" type stem thermocouple probe
- Uses beeper to 7) verify integrity of diodes and 8) check circuits for continuity
- Large 3-1/2 digit (2,000 count) LCD
- 15 minute Auto Power Off and 15 second backlight
- · Designed to meet CAT III 600V safety standard
- CE approved
- 1-year limited warranty

#### **SPECIFICATIONS:**

- ♦ Measurement Ranges/Accuracies:
  - AC Voltage: 0 to 500V/±0.8%
- DC Voltage: 0 to 500V/±0.5%
- AC Current: 0 to 200mA/±1.8%
- DC Current: 0 to 200mA/±1.8%
- Resistance: 0 to  $20M\Omega/\pm1.5\%$

- Temperature: -40° to 752°F (-40° to 400°C) /  $\pm$ (1.2% of reading + 7 digits) from 32° to 212°F (0° to 100°C)
- ♦ Overload Protection Level: 600VAC/DC with internal fuse
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<75%RH
- ♦ Power Source: (2) "AAA" batteries (included)

#### **INCLUDES:**

- "K" type stem thermocouple probe
- 1 Pair Double-Insulated 20 AWG Test Leads
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
501238	DMM45
016398	FX3000 3000 Amp Flex Clam
	Adaptor (optional, see p. 7)





CE

## MANUAL RANGING CAT III 600V DIGITAL MULTIMETER - DMM40

#### **FEATURES:**

- 6 functions, 19 ranges
- Measures 1) AC voltage, 2) DC voltage, 3) DC current, 4) resistance
- Uses beeper to 5) verify integrity of diodes and 6) check circuits for continuity
- Large backlit 3-1/2 digit (2,000 count) LCD
- · Designed to meet CAT III 600V safety standard
- CE approved

#### **SPECIFICATIONS:**

- ♦ Measurement Ranges/Accuracies:
  - AC Voltage: 0 to 500V/±2.5%
  - DC Voltage: 0 to 500V/±1.2%
  - DC Current: 0 to 200mA/±1.8%
  - Resistance: 0 to 2MΩ/±1.5%

- ♦ Overload Protection Level: 600VAC/DC with internal fuse
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<75%RH
- ♦ Power Source: 1 "9V" battery (included)

#### **INCLUDES:**

Battery

UPC

- 1 pair double-insulated 20 AWG test leads with 1A (max) rating
- User's Manual
- 1-Year Limited Warranty

NO.

50122 1	DMM40
01639 8	<b>FX3000</b> 3000 Amp Flex Clar Adaptor (optional, see p. 7)





#### **SMART MULTIMETER - SMT20**

Automatically measures voltage or resistance based on input. Ideal for basic troubleshooting.

- 7 functions, 24 ranges
- · Measures AC/DC voltage, resistance, frequency and capacitance
- · Also checks circuits for continuity
- Non-contact voltage (NCV) detector
- . ETL certified safe for CAT II 600V use
- Auto ranging
- 3-5/6 digit (6000 count) LCD
- Auto Power Off
   Low battery indication

#### **SPECIFICATIONS:**

- ♦ AC Voltage Range / Accuracy: 0 to 600V / ±1%
- ◆ DC Voltage Range / Accuracy: 0 to 600V / ±0.8%
- ♦ Resistance Range / Accuracy: 0 to 10MΩ / ±2% typical

- ♦ Frequency Range / Accuracy: 1Hz to 100kHz / ±1%
- ♦ Capacitance Range / Accuracy: 1nF to 100µF / ±5% typical
- ♦ NCV Detection Range: 50 to 600VAC
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @<75%RH
- ♦ Power Source: (2) LR44 or equivalent button batteries (included)

#### **INCLUDES:**

- Meter
- · Fixed (non-detachable) test leads
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01724 1	SMT20



# **Digital Multimeters**



#### 8-FUNCTION DIGITAL MULTIMETER WITH NCV DETECTION - DMM30

#### Ideal for making basic electrical measurements safely.

#### **FEATURES:**

- 8 functions, 21 ranges
- Measures AC/DC voltage, DC current and resistance
- Also checks continuity, diode integrity and battery voltage
- Non-contact voltage (NCV) detection
- ETL certified safe for CAT II 600V use
- Jumbo 3-1/2 digit (2000 count) LCD with 7/8 in. (22mm) high digits
- Powered by "9V" battery (included)
- Low battery indication

#### **SPECIFICATIONS:**

- ♦ AC/DC Voltage Range / Accuracy: 0 to 600V / ±1.0%
- ◆ DC Current Range / Accuracy: 0 to 10A / ±0.8% typical

- ♦ Resistance Range / Accuracy: 0 to 2MΩ / ±0.8%
- ♦ Max Resolutions: 0.1mV, 1μA, 0.1Ω
- ♦ Display: 3-1/2 digit (1999 count) LCD
- ◆ Dimensions: 7.40 x 3.66 x 1.97 in. (188 x 93 x 50mm)
- ♦ Weight (including battery): 13.4 oz. (380g)
- ♦ Power Source: "9V" battery (included)

#### **INCLUDES:**

- Meter
- · Double-insulated test leads
- Battery
- User's Manual
- 3 Year Limited Warranty

UPC NO. 01731 9 DMM30

## DIGITAL MULTIMETER - DMM20

#### Ideal for making basic measurements safely.

#### **FEATURES:**

- 7 functions, 20 ranges
- Measures AC/DC voltage, DC current, resistance
- Also checks for continuity and diode integrity
- Includes 1.5V & 9V battery test positions
- Large LCD
- · Safety-recessed test lead sockets
- · High-impact thermoplastic case
- ETL approved

#### **RANGES / ACCURACIES:**

- ♦ AC Voltage Measurement Range / Accuracy: 0 to 600V / ±1.2%
- DC Voltage Measurement Range / Accuracy: 0 to 600V / ±1%
- DC Current Measurement Range / Accuracy: 0 to 10A / ±2%
- Resistance Measurement Range / Accuracy: 0 to 2MΩ/ ±1.2%

- Max Resolutions: 0.1mV, 100μV, 0.1Ω
- Display: 3-1/2 digit (1999 count) LCD
- Dimensions: 5.0 x 2.8 x 1.0 in. (126 x 70 x 26mm)
- Weight: 4.4 oz. (125g)
- Power Source: 1 "9V" battery (included)

#### **INCLUDES:**

- Meter
- Test Leads
- Battery
- Soft Pouch
- User's Manual
- 1 Year Limited Warranty

**UPC NO.** 01701 2 **DMM20** 



**DMM20** 



#### **DIGITAL CREDIT CARD STYLE MULTIMETER - DMM333**

## Ideal for technicians on the go. Fits in shirt pocket.

#### **FEATURES:**

- 7 functions, 25 ranges
- Measures AC/DC voltage, AC/DC current, resistance
- · Also checks for continuity and diode integrity
- Auto ranging
- Large 2000-count LCD
- Data hold + max hold
- · Low battery indicator
- Auto power off

#### **SPECIFICATIONS:**

- ♦ AC Voltage Range/Accuracy: 0 to 500V/±(0.8% + 1 digit)
- DC Voltage Range/Accuracy:
   0 to 500V/±(0.5% + 5 digits)
- ♦ AC/DC Current Range/Accuracy: 0 to 200mA/±(1.8% + 5 digits)

- ♦ Resistance Range/Accuracy: 0 to  $20M\Omega/\pm$  (0.8% + 5 digits)<1M $\Omega$ ,  $\pm$ (2% + 5 digits)>1M $\Omega$
- Input Impedance (in DCV mode):  $10M\Omega$
- ♦ Operating Temperature: 32° to 140°F (0° to 60°C) @ <75%RH
- ♦ Dimensions: 4.5 x 2.3 x 0.5 in. (115 x 58 x 12mm)
- ♦ Weight: 3 oz. (84g)
- ♦ Power Source: 2 "LR44" batteries (included)

#### **INCLUDES:**

- Test Leads
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC NO. 50105 4 DMM333

**DMM333** 



# **Digital & Analog Multimeters**

#### **RUGGED SERVICE MULTIMETERS – DMM52FSG & DMM53FSG**

Ideal for heavy-duty and general-purpose use. A microamp range is essential for measuring flame rod current.

#### **FEATURES:**

- 8 functions, 31 ranges (DMM52FSG); 11 functions, 32 ranges (DMM53FSG)
- Measures AC/DC voltage, AC/DC current, resistance, bipolar transistor forward current gain (hFE)
- Also measures capacitance, frequency, temperature using included "K" type bead thermocouple probe (DMM53FSG only)
- 0 to 20µADC and 0 to 200µADC ranges (DMM52FSG) / 0 to 20µADC range (DMM53FSG) for measuring flame rod current
- · Checks continuity and diode integrity
- IP54 water/oil/dust protection
- 6.6 ft. (2m) drop-resistant
- ETL approved CAT III 600V safety rating
- Jumbo 3-1/2 digit (2000 count) LCD with 0.95 in. (24mm) high digits
- 25-minute Auto Power Off
- Powered by "9V" battery (not included)
- Low battery indication

#### **RANGES / ACCURACIES:**

- ♦ Range / Accuracy / Max. Resolution
  - AC/DC Current: 0 to 80A / ±2.5% typical / 1mA
  - AC/DC Voltage: 0 to 600V /  $\pm 1\%$  typical / 0.1mV
  - Resistance: 0 to 40M $\Omega/$   $\pm0.8\%$  typical /  $0.1\Omega$
  - Frequency (DMM53FSG only): 10Hz to 10MHz/ ±0.5% typical / 0.001Hz
  - Capacitance (DMM53FSG only): 0 to 40mF / ±4% typical / 0.001nF
  - Temperature (DMM53FSG only): -4° to 1832°F (-20° to 1000°C) / ±2% / 1°

#### **INCLUDES:**

- Meter
- "K" type probe with -40° to 500°F range (DMM53FSG only)
- 1000V/10A-rated double-insulated test leads
- Multi-function plug adaptor for bipolar transistors
- User's Manual
   1 Year Limited Warranty

UPC	NO.
01703 6	DMM52FSG
	NISTDMM52FS0
01720 3	DMM53FSG
	NISTDMM53FS(







DMM52FSG DMM53FSG

#### **ECONOMY DIGITAL MULTIMETER - DMM830HS**

#### Ideal for bench work.

#### **FEATURES:**

- 7 functions, 20 ranges
- Measures AC/DC voltage, DC current, resistance, bipolar transistor forward current gain (hFE)
- · Also checks for continuity and diode integrity
- 3-1/2-digit (1999 count) LCD

#### **SPECIFICATIONS:**

- ♦ AC Voltage Range/Accuracy: 0 to 750V/±(1.2% + 10 digits) or better
- ◆ DC Voltage Range/Accuracy: 0 to 1000V/±(1.2% + 2 digits) or better
- ◆ DC Current Range/Accuracy: 0 to 10A/±(2% + 2 digits) or better
- ♦ Resistance Range/Accuracy: 0 to 2MΩ/±(1% + 2 digits)

- lacktriangle Input Impedance:  $10 \mathrm{M}\Omega$  for all ranges
- ♦ hFE Measurement Range: 0 to 1000
- ♦ Display Digit Height: 0.5 in. (13mm)
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @ <80%RH</li>
- ♦ Dimensions: 5.2 x 2.8 x 1.0 in. (132 x 70 x 25mm)
- ♦ Weight: 4.9 oz. (138.9g)
- ♦ Power Source: 1 "9V" battery (included)

#### **INCLUDES:**

- Test leads Battery User's Manual
- 1-Year Limited Warranty

UFU	NU.
50100 9	DMM830HS
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. 7)





**DMM830HS** 

#### **ANALOG MULTIMETER - AM35UL**

#### Old-school meter still gets the job done.

#### **FEATURES:**

- 4 functions, 13 ranges
- Measures AC/DC voltage, DC current, resistance
- · Fuse and diode protected
- UL listed

#### **SPECIFICATIONS:**

- ♦ AC/DC Voltage Measurement Range: 0 to 500V
- ♦ DC Current Measurement Range: 0 to 250mA
- lacktriangle Resistance Measurement Range: 0 to 1M $\Omega$
- ♦ Dimensions: 4 x 2.5 x 0.75 in. (102 x 64 x 19mm)
- ♦ Weight: 2.75 oz. (78g)
- ◆ Power Source: 1 "AA" battery (included)

#### **INCLUDES:**

- Test leads
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
50005.7	AM35III





AM35UL





# **Test Leads**

**TL360W** 

**TL13** 



## **ALL WEATHER TEST LEADS – TL360W**

#### Ideal for cold weather.

#### **FEATURES:**

- · Flexible soft leads
- Medium alligator clips with insulated boots
- 1-Year Warranty

#### **SPECIFICATIONS:**

- ♦ Maximum Current: 10A
- ♦ Maximum Voltage: 300V
- ♦ Lead Thickness: 18 Gauge
- ♦ Length: 3 ft. (914mm)
- ♦ Weight: 4.2 oz. (118g)

UPC	NO.
51135 0	TL360W



#### TEST LEADS WITH HARD POINT - TL13

#### **FEATURES:**

- · Comfort-grip probe with PVC-insulated leads
- Safety-shrouded, right-angle plugs
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01344 1	TL13	



#### TEST LEADS - TL108

#### **FEATURES:**

- One pair PVC-insulated leads with right-angle
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01351 9	TL108	_



#### TEST LEADS - TL20K

- Includes 2 each: alligator clips, industrial test grip, right-angle silicon test leads
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01350 2	TL20K	



## **ALLIGATOR CLIP SET 1000V – ETL111**

## **FEATURES:**

- 1 pair alligator clips with boots
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01348 9	ETL111	

ETL111



## **Test Leads/Starter Switch**

## TEST CORD (MALE) - CT600M

## Brings power to areas without a 110V outlet.

#### **FEATURES:**

- · Red and black heavy duty boots
- Large clips
- 2 wire
- 1-Year Warranty

#### **SPECIFICATIONS:**

♦ Maximum Current: 13A

- ♦ Maximum Voltage: 125V
- ♦ ASWG: 16
- ♦ Length: 6 ft. (1.83m)
- ♦ Weight: 8 oz. (227g)

UPC	NO.	
50601 1	CT600N	





## **TEST CORD (FEMALE) - CT700F**

#### Brings power to areas without a 110V outlet.

#### **FEATURES:**

- Red and black heavy duty boots
- Large clips
- 3 wire
- Brings power to remote areas without 110V outlet
- 1-Year Warranty

#### **SPECIFICATIONS:**

- ♦ Maximum Current: 13A
- ♦ Maximum Voltage: 125V
- ♦ ASWG: 16
- ♦ Length: 2 ft. (610mm)
- ♦ Weight: 5.7 oz. (163g)

UPC	NO.
51095 7	CT700F





#### **MULTI-COLORED TEST LEADS - CT800**

## Handy set of jumpers.

#### **FEATURES:**

- 10 alligator-clip leads: 2 each white, red, black, yellow and green
- 1-Year Warranty

#### **SPECIFICATIONS:**

- ♦ Maximum Voltage: 300V
- ♦ ASWG: 22
- ♦ Length: 18 in. (457mm)
- ♦ Weight: 2.9 oz. (82g)

UPC	NO.
51105 3	CT800





## **STANDARD TEST LEADS - TL100**

## Ideal for use as AC jumpers.

#### **FEATURES:**

- 3 ft. long
- 1 each Red & Black
- 1-Year Warranty

#### **SPECIFICATIONS:**

- ♦ Maximum Current: 10A
- ♦ Maximum Voltage: 300V
- ♦ ASWG: 16
- ♦ Length: 3 ft. (914mm)
- ♦ Weight: 1.9 oz. (54g)

**UPC NO.** 51125 1 **TL100** 





## STARTER SWITCH 16/2, 20 AMP, PUSH BUTTON (UL SWITCH) – SSC6

#### Quickly hooks up motors/machinery for testing.

#### **FEATURES:**

- Red and black heavy duty boots
- Large clips
- Replaces any C-6 start switch
- 1-Year Warranty

#### **SPECIFICATIONS:**

- ♦ Maximum Current: 15A
- ♦ ASWG: 16/2
- ♦ Length: 2 ft. (610mm)
- ♦ Weight: 8.3 oz. (240g)

UPC	NO.	
51145 9	SSC6	





# **Circuit Analyzer**





LCD is backlit for easy reading in dark places

#### **AC CIRCUIT ANALYZER - CA10**

Ideal for identifying 110VAC power circuit and wiring problems that can cause overheating, short circuits, fires, equipment failures and poor equipment performance. Also checks performance of ground fault circuit interrupter (GFCI) outlets and residual current devices (RCDs).

- · Measures a branch circuit's line voltage, peak voltage and neutral-to-ground voltage
- Calculates a circuit's voltage drop in response to 12A, 15A and 20A loads
- Measures the impedance of hot, neutral and ground conductors as well as available shortcircuit current (ASCC)
- · Identifies wiring configurations and detects wiring faults and missing ground wires
- Tests the reliability and response time of GFCI outlets and RCDs
- Displays True RMS readings of all voltages except peak voltages
- · Works with 2- and 3-phase circuits
- Jumbo LCD with 30-second backlight
- · Familiar menu/sub-menu operation
- Data HOLD button and 30-minute auto power off
- 3-year limited warranty

#### **SPECIFICATIONS:**

- ♦ Line Voltage Measurement Range/Accuracy: 85 to  $265VAC/\pm (1.0\% + 0.2V)$
- ♦ Peak Voltage Measurement Range/Accuracy: 121 to 374VAC/± (1.0%+ 0.2V)
- ♦ Line Frequency Measurement Range/Accuracy: 45 to 65 Hz/ $\pm$  (1.0%+ 0.2Hz)
- ♦ Voltage Drop Measurement Range/Accuracy: 0.1 to 99.9\%/ $\pm$ (2.5\%+0.2\%)

- ♦ Load Voltage Measurement Range/Accuracy: 10 to  $265V/ \pm (2.5\% + 0.2V)$
- ♦ Neutral-to-Earth Voltage Measurement Range/Accuracy: 0 to  $10VAC/\pm(2.5\%+0.2V)$
- ♦ Hot, Neutral and Ground Line Impedance Measurement Range/Accuracy: 0 to  $3\Omega/ \pm (2.5\% + 0.02\Omega)$
- ♦ RCD Triggering Time Measurement Range/ Accuracy: 1ms to 6.5 seconds/  $\pm$ (1.0% +2ms)
- ♦ RCD Triggering Current Measurement Range/Accuracy: 30 to  $37\text{mA}/\pm(1.0\% + 0.2\text{mA})$
- ♦ GFCI Triggering Time Measurement Range/Accuracy: 1ms to 6.5 seconds/  $\pm (1.0\% + 2ms)$
- ♦ Operating/Storage Temperature: 32° to 122°F (0° to 50°C) @ <80% RH
- ♦ Dimensions: 7.6 x 3.1 x 1.5 in. (193 x 78 x 39mm)
- ♦ Weight (without Batteries): 10.4 oz. (295g)
- ♦ Power Source: 6 "AAA" batteries (included)

#### **INCLUDES:**

- 12 AWG, 20 in. (0.5m) Long Test Cable
- Batteries Soft Carrying Case
- User's Manual
   3-Year Limited Warranty

UPC NO. 015667 **CA10** 

Specifications:			
Parameter	Measurement Range	Measurement Accuracy	Display Resolution
Line Voltage	85 to 265VAC	± 1.0% ± 0.2V	0.1V
Peak Voltage	121 to 374VAC	± 1.0% ± 0.2V	0.1V
Line Frequency	45 to 65 Hz	± 1.0% ± 0.2Hz	0.1Hz
Voltage Drop	0.1 to 99.9%	± 2.5% ± 0.2%	0.1%
Load Voltage	10 to 265V	± 2.5% ± 0.2V	0.1V
Neutral-to-Earth Voltage	0 to 10VAC	± 2.5% ± 0.2V	0.1V
Hot, Neutral and Ground Line	0 to 3Ω	$\pm$ 2.5% $\pm$ 0.02Ω	0.01Ω
Impedance	>3Ω	NA	
GFCI Triggering Time	1ms to 6.5 sec.	± 1.0% ± 2ms	1ms
RCD Triggering Time	1ms to 6.5 sec.	± 1.0% ± 2ms	1ms
RCD Triggering Current	30 to 37mA	± 1.0% ± 0.2mA	0.1mA
Operating/Storage Temperature	32° to 122°F (0° to 50°C) @ <80% RH		
Dimensions	7.6 x 3.1 x 1.5 in. (193 x 78 x 39mm)		

The short test cable improves voltage-drop measurement accuracy

10.4 oz. (295g)

Weight (without Batteries)



## Cable & Pipe Locator

#### **CABLE AND PIPE LOCATOR – CL10**

Ideal for pinpointing the location of electrical cables and metal, water, or gas pipes behind walls, above ceilings or under floors. Can also trace circuits, detect open- and short-circuits, find outlets covered by plaster, identify a circuit's breaker, and locate blockages in plastic pipes.

- . Makes it safe to break through any wall by revealing and locating hidden infrastructure up to 6.6 ft. (2m) behind it
- Eliminates need to find and read construction drawings before starting a job
- Transmitter and receiver communicate on any of eight channels and display readings on a big, bright, multi-function graphic LCD. Both units also include a flashlight (for illuminating dark areas) and a buzzer that can be muted.
- · Makes it easy to identify the breaker associated with an energized or de-energized AC outlet
- Transmitter can also operate as an AC/DC voltmeter with a range of 12 to 600V
- Transmitter has three power levels; receiver has variable sensitivity
- Receiver's display can be backlit
- · Compatible with one- or two-pole circuits
- · Second transmitter is available to make locating short-circuits and cable leaks more accurate
- Used with a metal rod, system can locate blockages and constrictions in plastic pipes
- Transmitter is powered by one 9V battery; receiver by 6 "AAA" batteries
- · 3-year limited warranty

## **SPECIFICATIONS:**

#### **Transmitter**

- ♦ Output Frequency: 125 kHz
- ♦ Measurement Range/Accuracy in Voltmeter Mode: 12 to 600VDC or VAC (@60Hz)/±2.5%
- ♦ Display: LCD, with function display and column chart
- ♦ Overvoltage Rating: CAT III 300V
- ◆ Current Consumption: 31mA (min), 115mA (max)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ 80%RH
- ♦ Dimensions: 7.5 x 3.5 x 1.7 in. (190 x 89 x 42.5mm)

- ♦ Weight: Without battery: 12.7 oz. (360a) With battery: 14.8 oz. (420g)
- ◆ Power Source: 1 "9V" battery (included)

#### Receiver

- ◆ Tracking Depth (max): In cable locating mode: 2m for one-pole circuit, 0.5m for two-pole circuit, 2.5m for single-loop line; in grid voltage identification mode: 0.4m
- ◆ Display: LCD, with function display and column chart
- ◆ Current Consumption: 32mA (min), 89mA (max)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C)) @<80%RH
- ♦ Dimensions: 9.5 x 3.1 x 1.5 in. (242 x 78 x 39mm)
- ♦ Weight: Without batteries: 9.9 oz. (280g) With batteries: 12.3 oz. (350g)
- ♦ Power Source: 6 "AAA" batteries (included)

#### **INCLUDES:**

- Transmitter
- Receiver and 1 Pair of 5 ft. (1.5m) Long Red and Black Test Leads with Attachable Test **Probes and Alligator Clips**
- Grounding Rod
- Soft Carrying Case
- Batteries
- User's Manual
- 3-Year Limited Warranty

	UPC	NO.
_	01564 1	3 CI 10



**DURABLE, SOFT** CANVAS CARRYING CASE



TRANSMITTER







Tracing a cable behind a wall



Locating a circuit breaker



Includes: A Grounding Rod and 1 set of 5 ft. (1.5m) long Red and Black Test Leads with 1 pair each attachable Test Probes and Alligator Clips



**CL10** 

## **Breaker Finder & Wood/Metal Detectors**







TRANSMITTER/ SOCKET TESTER

#### CIRCUIT BREAKER FINDER WITH NCV DETECTOR & GFCI OUTLET CHECKER - BF20

#### **FEATURES:**

- Locates the breaker or fuse associated with any 110V outlet without tripping the breaker or blowing the fuse. Fully automatic operation turns two-man jobs into one-man jobs.
- Indicates five common outlet wiring faults in ground fault circuit interrupter (GFCI) and non-**GFCI** outlets
- · Checks the functioning of GFCI circuits
- Uses audible (beeper) and visual (LED) indications to safely (in non-contact fashion) detect "hot" (energized) outlets, lines and cables
- Bright white LED work light
- Designed to safety standard IEC 61010-1

#### **SPECIFICATIONS:**

- ♦ Safety Rating: CAT II 125V (transmitter)
- ♦ Outlet Wiring Indications: Correct wiring, Open ground, Open neutral, Open hot wire, Hot wire & ground reversed, Hot wire & neutral reversed, Open circuit

- ♦ NCV Detection Distance: 0.25 in. (6.2mm), max
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Dimensions:

Transmitter: 2.8 x 2.5 x 2.3 in. (71 x 64 x 58mm); Receiver: 7.4 x 1.8 x 1.5 in. (188 x 46 x 38mm)

♦ Weight: Transmitter: 2.1 oz. (60g); Receiver: 4.3 oz. (122g)

#### **INCLUDES:**

- 3-Year Limited Warranty

**UPC** NO. 01606 0 BF20



**BF20** 

## 3-IN-1 STUD/VOLTAGE/METAL DETECTOR - MSV100

Locates wood studs and joists and metal cables and pipes behind walls or inside furniture. Also detects energized AC outlets and "live" wires behind walls or ceilings. Ideal for building contractors, carpenters, plumbers, HVAC/R specialists, home inspectors, electricians, realtors, home owners and interior decorators.

- · Automatically compensates for wall thickness in all three detection modes
- In AC voltage mode, automatically compensates for distance to live wire
- · Center arrow and beeper pinpoint edges
- Visual and audible indications
- . Marking slot on top of unit
- . Big, bright backlit LCD

#### **SPECIFICATIONS:**

- ♦ Maximum Wall Thickness for Wood Detection: 3/4 in. (19mm)
- ♦ Maximum Detection Range for Iron or Copper Pipe: 1.5 in. (38mm)
- ♦ Maximum Detection Range for AC Voltage: 2 in. (50mm)

- ◆ Operating Temperature: 40° to 104°F (5° to 40°C)
- ♦ Dimensions: 7.1 x 3.0 x 1.2 in. (180 x 75 x 30mm)
- ♦ Weight: 7.3 oz. (207g)
- ♦ Power Source: "9V" battery (included)

#### **INCLUDES:**

- Battery
- · User's Manual
- 1-Year Limited Warranty

NO. 017104 MSV100





MSV350D



## DIGITAL 3-IN-1 LCD STUD/VOLTAGE/METAL DETECTOR - MSV350D

Ideal for locating studs, pipes, wires carrying voltage and hidden metal.

#### **FEATURES:**

- Uses LCD scanning indicators and buzzer to indicate direction and position of stud, batten, metal object or wiring
- · Uses variable sensitivity to distinguish between metal pipes/tubes and hot wires
- · Also distinguishes between battens and studs
- · Simultaneously detects studs and metal/wiring
- · Needs no probe
- · Battery charge indicator
- · Auto power off

UPC NO. MSV350D 0121758



## **SPECIFICATIONS:**

- ♦ Dimensions: 6.1 x 2.6 x 1.3 in. (155 x 65 x 32mm)
- ♦ Weight: 6.5 oz. (185g)
- ♦ Power Source: 1 "9V" battery (not included)
- ♦ Warranty: 1 year (limited)

#### **INCLUDES:**

- User's Manual
- 1 Year Limited Warranty



## **Non-Contact Voltage Detectors**

#### NON-CONTACT VOLTAGE DETECTOR WITH ADJUSTABLE SENSITIVITY -**VS4000**

Provides a safe (non-contact) way to check whether an electric line or cable or AC outlet is "hot" (energized).

- · Beeper sounds and red LED flashes when voltage is detected
- Wide voltage range
- · Adjustable sensitivity takes the guesswork out of identifying the "hot" wire of a bundle
- Safe for CAT IV 1000V use
- ETL approved
- · Built-in bright white LED flashlight
- Pocket clip

#### **SPECIFICATIONS:**

- ◆ Detection Range: 5 to 1000VAC @ 50 to 400Hz
- ♦ Detection Distance: 2.5 in. (64mm) max
- ♦ Power Source: 2 "AAA" batteries (included)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <85% RH
- ◆ Dimensions: 6.1 x 1.3 x 1.1 in. (154 x 32 x 28mm)

- ♦ Weight (with batteries): 1.8 oz. (55g)
- ♦ Power Source: 2 "AAA" batteries (included)

#### **INCLUDES:**

- Batteries
- User's Manuals
- 1-Year Limited Warranty

NO. VS4000 01723 4







#### AUDIBLE/VISUAL NON-CONTACT VOLTAGE DETECTOR, ETL CERTIFIED -**VS3000A**

Ideal for safely detecting energized wires and the hot side of AC outlets.

- Beeper sounds and LED lights when voltage is detected
- Safe for CAT III 1000V use
- · ETL certified
- Automatic battery check function

#### **SPECIFICATIONS:**

- ◆ Detection Range: 70 to 1000V @ 50 to 500Hz
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <85% RH
- ◆ Regulatory Compliance: ETL certified Conforms to UL 61010-1 and 61010-2-030

Certified to CAN/CSA C22.2 Nos. 61010-1 and 61010-2-030

- ♦ Dimensions:
- 6.0 x 1.1 x 0.9 in. (152 x 27 x 23.5mm)
- ♦ Weight (with batteries): 1.4 oz. (39g)
- ♦ Power Source: 2 "AAA" batteries (included)

#### **INCLUDES:**

- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.	
51000 1	VC3UUUV	





#### NON-CONTACT VOLTAGE DETECTOR WITH ADJUSTABLE SENSITIVITY AND 4:1 IR THERMOMETER - VR40

Enables anyone to check in a safe (non-contact) way whether a line, cable or AC outlet is "hot" (energized).

- · Beeper sounds and red LED flashes when voltage is detected
- Unique adjustable sensitivity feature enables accurate non-contact detection of voltage on 12VAC to 480VAC branch circuits and makes individual live wires in bundles easier to isolate
- Safe for CAT III 600V use
- · Also checks 110VAC outlets for wiring faults
- . 4:1 IRT with measurement range of -4° to 626°F (-20° to 330°C)
- 4-digit (2000 count) LCD temperature readout
- · Powerful built-in LED flashlight
- 15-second Auto Power Off (APO)
- · Pocket clip on back

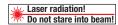
- Batteries User's Manual
- 3-Year Limited Warranty

#### **SPECIFICATIONS:**

- ♦ Four Detection Ranges: 12 to 25VAC, 70 to 125VAC, 150 to 240VAC, 250 to 600VAC
- ♦ Overall Voltage Detection Range: 12 to 600VAC @ 50/60Hz
- ♦ Max Non-contact Detection Distance: 0.25 in. (6.2mm)
- ♦ IRT Measurement Accuracy: ±3.8°F (2°C) or ±1% of reading (whichever is greater) above
- ♦ IRT Emissivity: Fixed at 0.95
- ♦ IRT Laser Power: <1mW (Class 2)
- ♦ Operating Temperature: 32° to 113°F (0° to 45°C)
- ♦ Dimensions: 6.0 x 1.2 x 1.2 in. (152 x 31 x 31mm)
- ♦ Weight (with batteries): 7.8 oz. (220g)
- ♦ Power Source: 2 "AAA" (LR03) batteries (included)

UPC	NO.
016343	VR40





**VR40** 

## **Circuit Testers**



## **LINE VOLTAGE TESTER - CT101**

#### Ideal for checking outlet wiring.

#### **FEATURES**

- Visual indication of AC or DC voltage
- Easy to use
- UL approved
- · Insulated housing
- · Pocket clip on back



#### **SPECIFICATIONS**

- ♦ Voltage Detection Range: 80 to 500VAC/DC
- ♦ Maximum Current: 0.3A @ 50/60Hz
- ♦ Safety Rating: CAT III 600V
- ♦ Lead Thickness: 18 AWG
- ♦ Weight: 0.6 oz. (17g)
- ◆ Operating Temperature:
   41° to 104°F (5° to 40°C) @ <80%RH (<60%RH above 88°F/31°C)</li>

UPC	NO.
51025 4	CT101



CT102



#### **LOW VOLTAGE LINE TESTER - CT102**

#### Ideal for checking doorbell transformers and low voltage relays.

#### FFATIIDES

- Visual indication of AC or DC voltage
- · Versatile alligator clip leads with boots
- ETL approved
- · Double insulated housing and leads
- · Pocket clip on back

#### **SPECIFICATIONS**

- ♦ Voltage Detection Range: 5 to 50V AC/DC
- ♦ Maximum Current: 5A
- ♦ Safety Rating: CAT I
- ◆ Lead Thickness: 20 AWG
- ♦ Operating Temperature: 41° to 104°F (5° to 40°C) @ <85%RH (decreasing linearly to <50%RH at 104°F/40°C)
- ♦ Weight: 0.6 oz. (17g)

UPC NO. 51035 3 CT102



#### Checks for voltage levels and hot wires.

#### **FEATURES**

- Different visual indications of eight common voltages four AC and four DC
- UL approved
- Double-insulated housing and leads
- Self-storing leads
- · Pocket clip on back



#### **SPECIFICATIONS**

- ♦ Working Voltages: 110V, 220V, 277V and 460V (AC or DC)
- ♦ Maximum Current: 0.3A @ 50/60Hz
- ♦ Safety Rating: CAT II 600V
- ♦ Lead Thickness: 20 AWG
- ◆ Operating Temperature: 41° to 104°F (5° to 40°C) @ <80%RH</li>
- ♦ Weight: 2.6 oz. (74g)

**UPC NO**. 51045 2 **CT103** 

CT103







3 WIRE RECEPTACLE TESTER WITH GFCI – GF1302

## Ideal for checking wall outlets.

#### **FEATURES:**

- Detects faulty wiring in 3-wire receptacles (CT300)
- Detects faulty wiring in 3-wire receptacles with ground fault circuit interrupters (GF1302)

**3 WIRE CIRCUIT ANALYZER - CT300** 

- Different combinations of three lights indicate six different fault types
- Designed for 120VAC circuits
- UL listed
- 1-Year Limited Warranty

UPC	NO.	
01359 5	CT300	
51067 4	GF1302	



# **Circuit and Component Testers**

## **BRIGHT RED LED SCREWDRIVER/CONTINUITY TESTER – ST600LED**

## Ideal for checking for continuity and voltage.

#### **FEATURES:**

- . Bright red LED indicates hot side and continuity
- · Continuity and polarity checks
- · Microwave leakage test
- · Checks fuses and bulbs
- Drop-resistant to 10 ft.
- 1-Year limited warranty

#### **SPECIFICATIONS:**

- ♦ AC Voltage Test Range: 70 to 250V (contact method); 70 to 600V (non-contact method)
- ♦ DC Voltage Test Range: 0 to 250V
- ♦ Continuity Test Range: 0 to 50MΩ
- ♦ Polarity Test Range: 1.5 to 36VDC
- ♦ Microwave Leakage Test: >5mW/cm<sup>2</sup>
- ◆ Power Source: 1 "LR44" battery (included)

NO. ST600LED





#### **SCREWDRIVER AC/DC VOLTAGE TESTER – ST400**

#### Checks for hot side of outlet.

#### **FEATURES**

- Visual indication of 80 to 250V (AC or DC)
- · Easy to use; no test leads or battery needed
- UL approved
- Double-insulated housing
- Pocket clip

#### **SPECIFICATIONS**

- ♦ Voltage Detection Range: 80 to 250VAC/DC
- ♦ Operating Temperature: 41° to 104°F (5° to 40°C) @ <80%RH
- ♦ Dimensions: 5.63 in. (143mm) long x 0.5 in. (13mm) maximum diameter
- ♦ Weight: 1 oz. (28g)

UPC NO. 51005 6 ST400



#### **AUTOMATIC DIGITAL CAPACITOR TESTER - CAP1500**

#### **FEATURES:**

- · Wide measurement range
- Uses precision dual slope A/D converter
- · Alligator clip leads for in-circuit testing
- · Zero adjust switch and low battery indicator
- 3-1/2-digit (1999 count) LCD
- Fuse-protected from overloads

#### **SPECIFICATIONS:**

- ♦ Measurement Range: 0 to 20mF over 9 ranges (0 to 200pF/2000pF/20nF/200nF/2µF/20µF/ 200µF/2000µF/20mF)
- ♦ Measurement Accuracy:  $\pm (0.5\% + 1 \text{ digit})$  or better below  $20\mu\text{F}$ ;  $\pm$ (5% +5 digits) or better above 20 $\mu$ F
- ♦ Sampling Time: 0.4 seconds
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @ <75%RH

- ♦ Dimensions: 5.3 x 2.8 x 1.4 in. (135 x 71 x 36mm)
- ♦ Weight: 7.1 oz. (201g)
- ♦ Power Source: 1 "9V" battery (included)

#### **INCLUDES:**

- Alligator Clip Test Leads
- Soft Case
- Battery
- User's Manual
- 1-Year Limited Warranty

50192 4 CAP1500



**CAP1500** 

## **Value Electrical Kits**

## **HVAC METER KIT - KHV57030**

Ideal for HVAC/R professionals who routinely measure surface temperature on contact or from a distance.



#### **KIT INCLUDES:**

- DMM570 Rugged True RMS Multimeter with NCV Detection & Lo-Z Mode (see p. 10)
- IRT730K 30:1 Ultra Wide-Range (-58° to 1472°F/-50° to 800°C) IR Thermometer with "K" Port
- Custom padded carrying case
- Instrument accessories, batteries and user's manuals

UPC	NO.
01664.0	KHV57030



## **ELECTRICIAN'S KIT - KEL57060**

Ideal for MRO professionals and electricians working residential and commercial jobs.



#### **KIT INCLUDES:**

- DMM570 Rugged True RMS Multimeter with NCV Detection & Lo-Z Mode (see p. 10)
- DAMP60 Auto Ranging 600 Amp Clamp Meter (see p. 6)
- · Custom padded carrying case
- Instrument accessories, batteries and user's manuals

UPC	NO.
01662 6	KEI 57060

#### **HVAC DMM KIT - KHVP57068**

Ideal for HVAC/R professionals who routinely measure current.



#### **KIT INCLUDES:**

- DMM570 Rugged True RMS Multimeter with NCV Detection & Lo-Z Mode (see p. 10)
- DAMP68 Auto Ranging AC/DC True RMS 400 Amp AC Clamp Meter (see p. 6)
- Custom padded carrying case
- Instrument accessories, batteries and user's manuals

UPC	NO.
01663.3	KHVP57068

**CK700-FX** 



# **Value Electrical Kits**

#### 3000 AMP CLAMP METER KIT - CK700-FX

Ideal for MRO professionals and electricians working commercial or light industrial jobs.

- CM700 Rugged Auto Ranging AC/DC True RMS 1000A Clamp Meter (see p. 4)
- FX3000 3000 Amp Flex Clamp Adaptor (see p. 7)
- Custom padded carrying case
- Instrument accessories, batteries and user's manuals

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UPC	NO.	
01661 9	CK700-FX	



#### **INDUSTRIAL TROUBLESHOOTING KIT - KT600**

Ideal for contractors, electricians, HVAC/R technicians and MRO specialists who use current, voltage and temperature readings to diagnose equipment problems.

- DAMP68 Auto Ranging AC/DC True RMS 400 Amp Clamp Meter
- DMM550 Rugged True RMS Multimeter with NCV Detection (see p. 10)
- VS4000 Non-Contact Voltage Detector with Adjustable Sensitivity (see p. 19)
- IRT657 12:1 Wide Range (-40° to 1076° F/ -40° to 580°C) IR Thermometer with Star Burst Laser Targeting
- Custom padded carrying case
- Instrument accessories, batteries and user's manuals

UPC	NO.
01738 8	KT600



#### **INDUSTRIAL MULTIMETER KIT - KT550**

Ideal for electrical contractors and electricians who need to measure high voltages and microamp currents in a variety of environments.

#### KIT INCLUDES:

- DMM550 Rugged True RMS Multimeter with NCV Detection (see p. 10)
- VS4000 Non-Contact Voltage Detector with Adjustable Sensitivity (see p. 19)
- Custom padded carrying case
- · Instrument accessories, batteries and user's manuals

UPC	NO.
01737 1	KT550





KT550





## **Value Electrical Kits**

# **ELECTRICAL TEST KIT - KT20** Ideal for professional and DIY electricians.

#### **KIT INCLUDES:**

- DAMP60 Auto Ranging 600 Amp Clamp Meter (see p. 6)
- DMM30 8-Function Digital Multimeter with NCV Detection (see p. 12)
- VS3000A Audible/Visual Non-Contact Voltage Detector, ETL Certified (see p. 19)
- GF1302 3-Wire Receptacle Tester with GFCI (see p. 20)
- Custom padded carrying pouch
- Instrument accessories, batteries and user's manuals

UPC	NO.	
01726 5	KT20	

#### **HVAC/R FIELD ELECTRICAL TEST KIT - KT50**

Ideal for HVAC/R technicians who routinely measure current—including very small burner flame rod currents.



- DAMP60 Auto Ranging 600 Amp Clamp Meter (see p. 6)
- DMM53FSG Rugged Service Multimeter (see p. 13)
- VS3000A Audible/Visual Non-Contact Voltage Detector, ETL Certified (see p. 19)
- Custom padded carrying pouch
- Instrument accessories, batteries and user's manuals

UPC	NO.
01732 6	KT50

#### **ELECTRICAL TROUBLESHOOTING KIT - KT5**

Ideal for checking outlets and wiring.



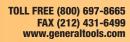
#### **KIT INCLUDES:**

- Smart Multimeter (see p. 11)
- VS4000 Non-Contact Voltage Detector with Adjustable Sensitivity
- GF1302 3-Wire Receptacle Tester with GFCI (see p. 20)
- Instrument batteries and user's manuals

UPC	NO.
01740 1	KT5















# Specialty Tools & Instruments



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