

MM650 CAT IV True RMS Multimeter

With Low Input Impedance mode (LoZ)

Features:

- True RMS provides better accuracy on non-sinusoidal or noisy waveforms
- Measures AC/DC Voltage and Current, Resistance, Temperature, Capacitance, Frequency, Diode and Continuity
- μ A Current measurement
- Low input impedance (Lo Z) mode for ACV/DCV measurements to identify ghost voltages
- 6000 count high performance multimeter with 61 segment analog bargraph for trending
- Backlit LCD, Buttons, and Switch Selector
- Min/Max/Avg, Peak Hold, Data Hold and Relative mode
- Auto power off and low battery indicator
- Waterproof, meets IP67 standards
- Built-in Flashlight for added safety in dark spaces
- Rubberized overmolded housing provides impact and drop resistance
- Complete with test leads, temperature probe, (4) AAA batteries, and carrying case
- Optional model complete with Certificate of Traceability to N.I.S.T.
- 3-year warranty

Applications:

- Diagnose common wiring problems; Test batteries, solar cells, wall plugs, and power outlets; Check polarity of wires in wiring installations; Measure input and output resistance of circuits (motors, transformers, resistors); Check continuity of wires, circuits

Specifications

Display counts	6000 count + 61 segment analog bargraph
Basic Accuracy	$\pm 0.5\%$
AC/DC Voltage	1000V
AC/DC Current	10A
AC/DC μ A Current	600 μ A
Resistance	60M
Temperature	-4 to 1400°F (-20 to 760°C)
Capacitance	6000 μ F
Frequency	10kHz
Duty Cycle	0.1 to 99.9%
Low impedance (Lo Z) Mode	Yes
Power	(4) AAA batteries
Waterproof	IP67
Safety Category	CAT IV-600V
Dimensions/Weight	6.7 x 3 x 1.8" (170 x 74 x 45mm) / 7.7oz. (218g)

Ordering Information:

MM650 CATIV True RMS Multimeter
MM650-NIST MM650 Including Certificate of Traceability to N.I.S.T.



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Range selector illuminates to allow for easy selection in dark areas



CM1000 & CM1050 1000A AC & AC/DC True RMS Clamp Meters

True RMS Clamp Meter with Inrush current, Low Pass Filter and LoZ

Features:

- Captures the instantaneous surge (inrush) current when power equipment is turned on
- 1.4" (35mm) clamp jaw
- Low Pass Filter (LPF) for filtering frequency and harmonic interference when measuring variable frequency drives
- LoZ mode for identifying ghost voltages
- Peak voltage measurement with Min/Max
- Built-in Non-Contact Voltage Detector with LED
- Data Hold freezes the display
- Relative Mode for making comparisons to a stored reference value
- Auto power off with disable
- Built-in flashlight
- Includes test leads, Type K thermocouple bead probe, 3 AAA batteries, and carrying case
- 1-year warranty



CM1000

CM1050

Model CM1000:

- Measures 1000A True RMS AC Current

Model CM1050:

- Measures 1000A True RMS AC and DC Current
- DC Zero function

Applications:

Typically when using a multimeter to measure current, you would have to "break the circuit" and place the meter in series with it, so that voltage and current would pass through it. A clamp meter allows you to easily measure current without breaking the circuit by clamping around a single conductor. This saves time and the circuit will not be damaged.

Ordering Information:

- CM1000 1000A AC True RMS Clamp Meter
- CM1000-NIST CM1000 with Certificate of Traceability to NIST
- CM1050 1000A AC/DC True RMS Clamp Meter
- CM1050-NIST CM1050 with Certificate of Traceability to NIST

	CM1000	CM1050
True RMS	√	√
Display counts	6000 count	6000 count
AC Current	1000A	1000A
ACA Accuracy	±2.8%	±2.8%
DC Current	—	1000A
AC/DC Voltage	1000V	1000V
Resistance	60MΩ	60MΩ
Temperature	-4 to 1832°F (-20 to 1000°C)	-4 to 1832°F (-20 to 1000°C)
Capacitance	100mF	100mF
Frequency	100kHz	100kHz
Duty Cycle	10.0 to 90.0%	10.0 to 90.0%
Continuity	<50Ω	<50Ω
Low Pass Filter (LPF)	Yes	Yes
LoZ	Yes	Yes
NCV Detector	>90V	>90V
Inrush Current	100ms	100ms
Safety Category	CAT IV-600V	CAT IV-600V
Dimensions	9.9 x 3.2 x 1.7" (249 x 81.5 x 42.2mm)	9.9 x 3.2 x 1.7" (249 x 81.5 x 42.2mm)
Weight	11.3oz (320g)	11.5oz (327g)



ET200 AC Line Splitter and GFCI Receptacle Tester

Two very useful and necessary tools for residential and commercial electricians, home inspectors, and do-it-yourselfers

Features:

- Combines a GFCI Receptacle Tester and AC Line Splitter in one tool
- Line splitter features:
 - Check outlet wiring, measure voltage, and use your clamp meter to measure current up to 15A without breaking the circuit
 - Clamp around the 1X position for a direct current reading
 - Use the 10X position to display low current readings multiplied by 10
- Receptacle Tester Features:
 - Test GFCI for proper operation
 - Detect faulty wiring in 3-wire receptacles
 - Lights display 5 wiring faults: Open Ground, Open Neutral, Hot/Ground Reverse, Open Hot, Hot/Neutral Reverse
 - Easy to read fault label on both sides for receptacles with ground up or ground down installation



Specifications

Input Voltage	120V ± 10%
Current	Maximum 15A
Safety Category	CAT II 300

Ordering Information:

ET200 AC Line Splitter and GFCI Receptable Tester



CBF200 3-in-1 Circuit Breaker Finder

Circuit Breaker Finder, GFCI Receptacle Tester and Non-Contact Voltage (NCV) Detector

Features:

- Safely identify and label breaker locations within any electrical panel without removing power
- Comparison mode helps to identify the correct breaker with the signal strengths are very close
- Detect faulty wiring in 3-wire receptacles
- Lights display 6 wiring faults:
Open Ground, Open Neutral, Hot/Ground Reverse, Open Hot, Hot/Neutral Reverse, Hot on Neutral with Hot Open
- Test GFCI for proper operation
- Built-in Non-Contact Voltage Detector (80-300V, CAT III-300V)
- One person operation
- Includes Transmitter, Receiver and 9V Battery
- cETLus listed



Applications:

- Useful, one person operation tool for residential and commercial electricians, home inspectors, kitchen and bath installers, apartment/condo property managers, DIY'ers and handymen

Specifications

Transmitter	
Voltage	120VAC Single Phase Two Wires (Live, Neutral) with Ground
Frequency	47 ~ 63 Hz
GFCI Leakage Current	7mA @ 120VAC
Safety Standard	CAT II 300V
Receiver	
Battery	9V Alkaline x 1
Auto Shut Down	After 10 minutes without any operation
Non-Contact Voltage Detection	24-300VAC
Safety Standard	CAT III 300V
Transmitter Dimensions	4.7 x 2.5 x 1.3" (118.5 x 63 x 32mm)
Receiver Dimensions	5.1 x 2.4 x 1.5" (130 x 62 x 36.9mm)
Weight	9.8oz (260g)



Ordering Information:

CBF200 3-in-1 Circuit Breaker Finder



IRT220 Non-Contact 12:1 Laser IR Thermometer

Instantly measure the temperature with Min/Max of objects without making contact

Features:

- Built-in laser identifies the measurement area
- Backlit LCD display with selectable °F or °C readout
- 0.95 fixed emissivity
- Min/Max to monitor lowest and highest measurement readings
- Automatic Data Hold
- Auto power off after 10 seconds
- Complete with 9V battery
- Optional model complete with Certificate of Traceability to N.I.S.T.
- 1-year warranty

Applications:

- Measure the surface temperature of objects that are too hot to touch or hard to reach
- Measure moving objects



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Specifications

Temperature Range	-4 to 932°F (-20 to 500°C)
Accuracy	±2%
Resolution	0.1°F/°C
Distance to Target Ratio	12:1
Response Time	500ms
Emissivity	0.95 fixed
Power	9V battery
Dimensions	5.4 x 2.9 x 1.5" (137 x 73 x 39mm)
Weight	5.2oz (148.5g)



Ordering Information:

IRT220 Non-Contact 12:1 Laser IR Thermometer
IRT220-NIST IRT220 Including Certificate of Traceability to N.I.S.T.

CE

TT-290 6-in-1 Multifunctional Pliers

Needle Nose Plier cuts, strips and crimps

Features:

- Polished, Chrome Vanadium material
- Drop Forged & Heat Treated for exceptional strength & durability
- 6 in 1 Functions
 1. Gripping and Looping
 2. Screw Extractor
 3. Stripping 10-18 AWG Solid 12-20 AWG stranded
 4. Wire Cutting 2.0mm
 5. Screw Shearing: 6-32 & 8-32 screw
 6. Crimping
- Comfortable grip & handle material: Thermoplastic Rubber
- Size: 8.5" (212mm)
- Weight: 282g
- 1 year warranty



Ordering Information:

TT-290 8.5" Multifunctional Pliers