# TEST & MEASUREMENT



**Klein Tools** has been manufacturing professional hand tools for almost 160 years. The company remains committed to providing the best hand tools in the industry while supporting electricians and professional tradespeople around the world with quality and reliability they can trust.

Tested Tough! Our products stand up to the demands of the professionals who use them every day, delivering all the performance, durability and precision needed to get the job done right, the first time, every time! Klein's new meters and electrical testers are packed with capabilities and functionality:

- Designed **TOUGH** to withstand jobsite drops and rough conditions
- Easy-to-use dials and buttons
- Large, bright, evenly backlit displays
- Molded-in test lead holders
- · Comfortable, compact over-molded housing that's easy to hold

The new Test & Measurement line offers a variety of additional products including 10x Line Splitters, Outlet Testers, Non-Contact Voltage Testers, and optional accessories (such as carrying pouches, magnetic hangers, replacement leads), completing a product line that will exceed expectations on the most demanding jobsites for years to come.

Trusted Safe! These new digital clamp and multimeters boast capabilities that are specifically aligned with customers' expanding jobsite needs and expectations. These products were designed to meet CAT III or CAT IV requirements, as defined by IEC 61010 (3rd edition) standards. To the professional electrician and electrical technician, Klein knows that nothing is more important than safety. And that's why Klein has been **the #1 choice of electricians since 1857.** 



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LISTED US

Intertek

True RMS Technology

Measurement

Clamp trigger

The **CL600** is an auto-ranging True Root-Mean-Squared (TRMS) digital clamp meter that measures AC current via the clamp, and measures AC/DC voltage, resistance, continuity, and tests diodes via test leads.

The **CL700** is an auto-ranging True Root-Mean-Squared (TRMS) digital clamp meter that measures AC current via the clamp, and measures AC/DC voltage, resistance, continuity, frequency, capacitance, and tests diodes via test leads, and temperature via a thermocouple probe. It also features a Low Impedance (LoZ) mode for identifying and eliminating ghost or stray voltages.

(TRMS) digital clamp meter that measures AC/DC current via the clamp, measures AC/DC voltage, resistance, continuity, frequency, capacitance, and tests diodes via test leads, and temperature via a thermocouple probe. It also features a Low Impedance (LoZ) mode for identifying and eliminating ghost or stray voltages.

include a thermocouple with adapter.



Test lead holder

Non-contact

sensor

voltage testing

Function selector switch

Function buttons

LCD display

Test lead input jacks





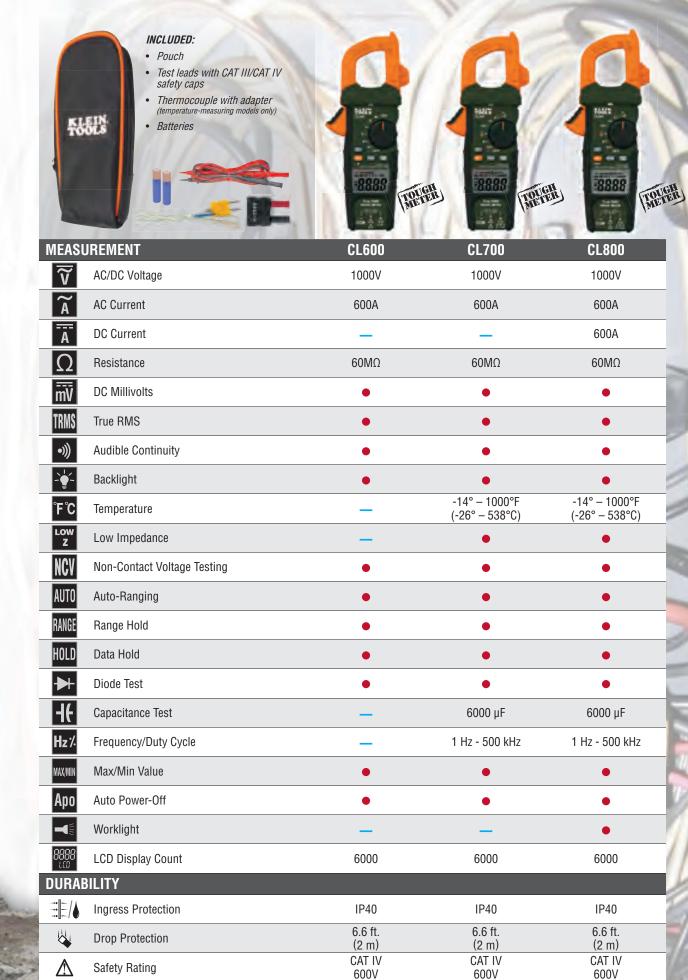


KLEIN. TOOLS

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Specifications subject to change.

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Clamp trigger

The **CL110** is an auto-ranging digital clamp meter that measures AC current via the clamp, and AC/DC voltage, resistance and continuity via test leads.

The **CL210** is an auto-ranging digital clamp meter that measures AC current via the clamp, AC/DC voltage, resistance and continuity via test leads, and temperature via a thermocouple probe.

The CL310 is an auto-ranging True Root-Mean-Squared (TRMS) digital clamp meter that measures AC current via the clamp, AC/DC voltage, resistance, continuity, frequency, capacitance, and tests diodes via test leads, and temperature via a thermocouple probe.

The CL110, CL210 and CL310 clamp meters include a nylon carrying pouch, test leads, and batteries. The CL210 and CL310 also include a thermocouple.

Also available: CL110KIT Electrical Maintenance & Test Kit. Includes CL110 Clamp Meter, RT210 GFCI Receptacle Tester and 69409 Line Splitter-10x, nylon carrying pouch, test leads and batteries.



KLEIN. TOOLS CL210

> Function selector switch

LCD display

Function buttons

Test lead input jacks











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EASUR	REMENT	CL110	CL210	CL310
V A	C/DC Voltage	600V	600V	600V
à A	C Current	400A	400A	400A
Ω Re	esistance	20ΜΩ	20ΜΩ	40ΜΩ
n <b>V</b> A	C Millivolts	•	•	_
n <b>V</b> D	C Millivolts	•	•	•
RMS Tr	ue RMS	_	_	•
• <b>))</b> At	udible Continuity	•	•	•
<b>∳</b> - Ba	acklight	•	•	•
<b>F°C</b> Te	emperature	_	-40° – 1832°F (-40° – 1000°C)	-40° – 1832°F (-40° – 1000°C)
UTO A	uto-Ranging	•	•	•
NGE R	ange Hold	•	•	•
OLD Da	ata Hold	•	•	•
<b>→</b> Di	ode Test	_	_	•
<b>(</b> Ca	apacitance Test	_	_	4mF
<b>lz%</b> Fr	equency/Duty Cycle	_	_	10Hz – 1MHz
AX/MIN IVI	ax/Min Value	MAX 🗡 MIN ×	MAX 🗡 MIN ×	MAX 🗡 MIN 🗡
<b>\po</b> At	uto Power-Off	•	•	•
888 L(	CD Display Count	2000	2000	4000
URABIL	LITY			
DI	rop Protection	3.3 ft. (1 m)	3.3 ft. (1 m)	3.3 ft. (1 m)
<u></u> Sa	afety Rating	CAT III 600V	CAT III 600V	CAT III 600V
			Spec	cifications subject to ch

DIGITAL

CLAMP METERS

# FUNCTIONS & FEATURES

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DIGITAL





	THE STATE OF			
(	CL600	CL700	CL800	

GLAIMP IMETER		45		Part Super	LEER LANGE	LERY WE
FEATURES	CL110	CL210	CL310	CL600	CL700	CL800
<b>Durability</b>	CAT	CAT	CAT	CAT LIZE	CAT LAZE	CAT LY2m
Drop Protection	3.3 ft. (1 m)	3.3 ft. (1 m)	3.3 ft. (1 m)	6.6 ft. (2 m)	6.6 ft. (2 m)	6.6 ft. (2 m)
Ingress Protection	_	_	_	IP40	IP40	IP40
Safety	CAT III 600V	CAT III 600V	CAT III 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V
AC Voltage (Volts)	600V	600V	600V	1000V	1000V	1000V
DC Voltage (Volts)	600V	600V	600V	1000V	1000V	1000V
AC Current (Amps)	400A	400A	400A	600A	600A	600A
DC Current (Amps)	_	_	_	_	_	600A
Ohms (Resistance)	20ΜΩ	20ΜΩ	40ΜΩ	60ΜΩ	60ΜΩ	60ΜΩ
AC Millivolts	•	•	_	_	_	_
DC Millivolts	•	•	•	•	•	•
TRMS True RMS	_	_	•	•	•	•
Audible Continuity	•	•	•	•	•	•
- Backlight	•	•	•	•	•	•
°F°C Temperature	_	-40° - 1832°F (-40° - 1000°C)	-40° - 1832°F (-40° - 1000°C)	_	-14° – 1000°F (-26° – 538°C)	-14° – 1000°F (-26° – 538°C)
Low Impedance	_	_	_	_	•	•
NCV Non-Contact Voltage Testing	_	_	_	•	•	•
AUTO Auto Ranging	•	•	•	•	•	•
RANGE Range Hold	•	•	•	•	•	•
HOLD Data Hold	•	•	•	•	•	•
Diode Test	_	_	•	•	•	•
	_	_	4000 μF	_	6000 μF	6000 μF
Hz% Frequency / Duty Cycle	_	_	10Hz – 1MHz	_	1Hz – 500 KHz	1Hz – 500 KHz
Max/Min	MAX only	MAX only	•	•	•	•
Magnetic Mount	_	_	_	Available As Accessory	Available As Accessory	Available As Accessory
Worklight	_	_	_	_	_	•
Apo Auto-Power Off	•	•	•	•	•	•
8888 LCD Display Count	2000	2000	4000	6000	6000	6000
					0 ''' ''	

# DIGITAL MULTIMETERS









AND DESCRIPTION OF REAL PROPERTY.		26, 503	Min	William
FEATURES	MM300	MM400	MM600	MM700
Durability	CAT	CAT	CAT LAZAM	CAT LAST
Drop Protection	3.3 ft. (1 m)	3.3 ft. (1 m)	6.6 ft. (2 m)	6.6 ft. (2 m)
Ingress Protection	_	_	IP42	IP42
<u> </u>	CAT III 600V	CAT III 600V	CAT IV 600V	CAT IV 600V
AC Voltage (Volts)	600V	600V	1000V	1000V
DC Voltage (Volts)	600V	600V	1000V	1000V
AC Current (Amps)	_	10A	10A	10A
DC Current (Amps)	10A	10A	10A	10A
Ohms (Resistance)	2ΜΩ	40ΜΩ	40ΜΩ	40ΜΩ
DC Millivolts	•	•	•	•
AC Milliamps	_	•	•	•
mA DC Milliamps	•	•	•	•
AC Microamps	_	•	•	•
DC Microamps	•	•	•	•
TRMS True RMS	_	_	_	•
Audible Continuity	•	•	•	•
- Backlight	_	•	•	•
°F°C Temperature	_	0° - 1000°F (-18° - 538°C)	0° – 1000°F (-18° – 538°C)	0° - 1500°F (-18° - 816°C)
Low Impedance	_	_	_	•
AUTO Auto Ranging	_	•	•	•
RANGE Range Hold	_	•	•	•
HOLD Data Hold	•	•	•	•
Diode Test	•	•	•	•
<b>H</b> Capacitance Test	_	200 μF	1000 μF	4000 μF
Hz% Frequency / Duty Cycle	_	1Hz – 50 KHz	1Hz – 500 KHz	1Hz – 500 KHz
MAXMIN Max / Min	_	•	•	•
Lead Warning	_	_	•	•
IIIII Bar Graph	_	_	_	•
Magnetic Mount	Available As Accessory	Available As Accessory	Available As Accessory	Available As Accessory
Apo Auto-Power Off	_	•	•	•
Battery Test	•	_	_	_
LCD Display Count	2000	4000	4000	4000

FUNCTIONS & FEATURES

EH METER MULTIMETERS











LCD display

Test lead input jacks



KLEIN TOOLS. MM700

The **MM600** is an auto-ranging digital multimeter that measures AC/DC voltage, AC/DC current, and resistance. It also measures temperature, capacitance, frequency, duty-cycle, and tests diodes and continuity.

The MM700 is an auto-ranging True Root-Mean-Squared (TRMS) digital multimeter that measures AC/DC voltage, AC/DC current, and resistance. It also measures temperature, capacitance, frequency, duty-cycle, and tests diodes and continuity.

The MM600 and MM700 include a nylon carrying pouch, test leads, alligator clips, batteries and thermocouple with adapter.







# INCLUDED:

Pouch

FOOLS

- Test leads with CAT III/CAT IV safety caps
- Alligator clips
- · Thermocouple with adapter







AC/DC Voltage  AC/DC Current  Resistance  DC Millivolts  AC/DC Milliamps  AC/DC Microamps  True RMS  Audible Continuity  Backlight	MM600  1000V  10A  40MΩ  •  •  0° – 1000°F (-18° – 538°C)	MM700  1000V  10A  40MΩ  •  •  0° – 1500°F (-18° – 816°C)
AC/DC Current  Resistance  DC Millivolts  AC/DC Milliamps  AC/DC Microamps  True RMS  Audible Continuity	10A 40MΩ • • • 0° – 1000°F	10A 40MΩ • • • • 0° – 1500°F
Resistance  DC Millivolts  AC/DC Milliamps  AC/DC Microamps  True RMS  Audible Continuity	40MΩ  • • • • • 0° – 1000°F	40MΩ  • • • • • • • • • • • • • • • • • •
DC Millivolts  AC/DC Milliamps  AC/DC Microamps  True RMS  Audible Continuity	• • • • 0° – 1000°F	• • • • 0° – 1500°F
AC/DC Milliamps  AC/DC Microamps  True RMS  Audible Continuity		
AC/DC Microamps  True RMS  Audible Continuity		
True RMS Audible Continuity		
Audible Continuity		
Backlight		
Temperature	_	
Low Impedence (Low Z)		•
Auto-Ranging	•	•
Range Hold	•	•
Data Hold	•	•
Diode Test	•	•
Capacitance Test	1000 μF	4000 μF
Frequency/Duty Cycle	1Hz – 500 KHz	1Hz – 500 KH:
Max/Min Value	•	•
Lead Warning	•	•
Bar Graph	_	•
Auto Power-Off	•	•
LCD Display Count	4000	4000
DURABILITY		
Ingress Protection	IP42	IP42
Drop Protection	6.6 ft. (2 m)	6.6 ft. (2 m)
Safety Rating	CAT IV 600V	CAT IV 600V



CE c Ustre Dus The MM300 is a manual-ranging digital multimeter that measures AC/DC voltage, DC current, and resistance. It also tests diodes and continuity, and has a battery test mode.

The MM400 is an auto-ranging digital multimeter that measures AC/DC voltage, AC/DC current, and resistance. It also measures temperature, capacitance, frequency, duty-cycle, and tests diodes and continuity.

The MM300 and MM400 multimeters include test leads and batteries. The MM400 also includes a thermocouple with adapter.



Magnetic hanger 69417 (optional)



- Test leads with CAT III/CAT IV safety caps
- · Thermocouple with adapter
- Batteries







IEASUREMENT	MM300	MM400
AC/DC Voltage	600V	600V
AC Current	_	10A
A DC Current	10A	10A
Resistance	2ΜΩ	40ΜΩ
DC Millivolts	•	•
AC Milliamps	_	•
nĀ DC Milliamps	•	•
AC Microamps	_	•
μ <b>Ä</b> DC Microamps	•	•
Audible Continuity	•	•
<b>Backlight</b>	_	•
F°C Temperature	_	0° – 1000°F (-18° – 538°C)
UTO Auto-Ranging	_	•
Range Hold	_	•
OLD Data Hold	•	•
Diode Test	•	•
Capacitance Test	_	200 μF
z% Frequency/Duty Cycle	_	1 Hz – 50 kHz
Max/Min Value	_	•
po Auto Power-Off	_	•
Battery Test	•	_
LCD Display Count	2000	4000
URABILITY	004	0.0.4
Drop Protection	3.3 ft. (1 m)	3.3 ft. (1 m)
♠ Safety Rating	CAT III 600V	CAT III 600V

Specifications subject to change.

Lead storage

DIGITAL MULTIMETERS

# **Non-Contact Voltage Testers**



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The NCVT-1 detects standard voltage (48-1000V AC) in cables, cords, circuit breakers, lighting fixtures, switches, outlets and wires.



and is perfect for use in security, entertainment, communications, environmental control and irrigation systems.



The NCVT-3 detects 12-1000V AC and includes a bright LED flashlight that illuminates dark or dimly-lit work areas. Rated IP67: dustproof/waterproof, it can withstand a 6.6 ft. (2m) drop.

# Accessories

# **Replacement Test Leads**

Compatible with all Klein meters and most other brands. Includes screw-on alligator clips. Safety rating: CAT IV 600V, CAT III 1000V.



# Line Splitter 10x 69409

Allows the measuring of current draw up to 15A without having to split the load's power cord. For use with all Klein clamp meters.



# **Magnetic Hanger** 69417

For use with Klein Tools MM300, MM400, MM600 and MM700 multimeters and CL600, CL700 and CL800 clamp meters.

# **Magnetic Hanger** 69190

For use with previousgeneration Klein Tools multimeters MM1000. MM1300, MM2000 and MM2300.



# **Carrying Case** 69401

Practical pouch for use with Klein meters and other small tools. Constructed of 600 denier polyester, with heavy duty zipper.

4 x 9-1/4 x 2-1/2" (102 x 235 x 57 mm)

# **Receptacle Testers**

KLEIN TOOLS.

Designed to detect the most common wiring problems! The RT110 instantly diagnoses common wiring faults in standard grounded outlets, while the RT210 works with both standard and GFCI (ground fault circuit interrupter) outlets.



NCVT-3

NCVT-2









# **Test Kits**



# **Electrical Test Kit** 69149

Easy-to-use kit to diagnose electrical problems quickly.

Kit includes: MM300 Digital Multimeter, NCVT-1 Non-Contact Voltage Tester, RT105 Receptacle Tester, test leads and batteries.











# **Electrical Maintenance** & Test Kit CL110KIT

The CL110 is an auto-ranging digital clamp meter that measures AC current via the clamp, and AC/DC voltage, resistance and continuity via test leads.

Kit includes: CL110 Digital Clamp Meter, 69409 10x Line Splitter, RT210 GFCI Receptacle Tester, test leads, batteries and carrying case.









ACCESSORIES

20

TEST

# Tested Tough. Trusted Safe.



See our complete line of Test & Measurement products at www.kleintools.com







