## **TEST & MEASUREMENT** *Tested Tough. Trusted Safe.*



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**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.** 

## Tested Tough. Trusted Safe.

 TOUGH METER Clamp Meters

 Digital Clamp Meters

 Functions & Features Comparison C

 TOUGH METER Multimeters

 Digital Multimeters

 Digital Multimeters

 Non-Contact Voltage Testers & Rece

 Accessories & Kits

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INCLUDED: Pouch • Test leads with CAT III/CAT IV safety caps • Thermocouple with adapter temperature-FLEIN Batteries MEASUREMENT  $|\overline{\widetilde{\mathsf{v}}}|$ AC/DC Voltage Ã AC Current Ā DC Current Ω Resistance mV DC Millivolts TRMS True RMS •))) Audible Continuity -`**∳**'-Backlight °F ℃ Temperature LOW Z Low Impedance NCV Non-Contact Voltage Testing AUTO Auto-Ranging RANGE Range Hold HOLD Data Hold ₩ Diode Test |+|+ Capacitance Test Hz % Frequency/Duty Cycle Max/Min Value MAX/MIN Apo Auto Power-Off Worklight 8668 LCD Display Count DURABILITY ===== Ingress Protection 5 Drop Protection Safety Rating

	0	d
	THE REAL	
CI 600	CI 700	CI 800

CL600	CL700	CL800
1000V	1000V	1000V
600A	600A	600A
_	_	600A
60MΩ	60MΩ	60MΩ
•	•	•
•	•	•
•	•	•
•	•	•
_	-14° – 1000°F (-26° – 538°C)	-14° – 1000°F (-26° – 538°C)
_	•	•
•	•	•
•	•	•
•	•	•
•	•	•
•	•	•
_	6000 μF	6000 µF
_	1 Hz - 500 kHz	1 Hz - 500 kHz
•	•	•
•	•	•
_	_	•
6000	6000	6000
IP40	IP40	IP40
6.6 ft. (2 m)	6.6 ft. (2 m)	6.6 ft. (2 m)
CAT IV	CAT IV	CAT IV
600V	600V	600V
	Spe	cifications subject to change.

**OUGH METER** CLAMP METERS



CEDUS

Intertek

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.

Clamptrigger

The **GL210** 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.



Backlit LCD screen

INCLUDED: • Pouch • Test leads with CAT III/CAT safety caps • Thermocouple (temperature-measuring models on • Batteries			
IEASUREMENT	CL110	CL210	CL310
X AC/DC Voltage	600V	600V	600V
AC Current	400A	400A	400A
Ω Resistance	20ΜΩ	20ΜΩ	40ΜΩ
MV AC Millivolts	•	•	—
T DC Millivolts	•	•	•
RMS True RMS	—	—	•
•)) Audible Continuity	•	•	•
Sacklight	•	•	•
F°C Temperature	—	-40° – 1832°F (-40° – 1000°C)	-40° – 1832°F (-40° – 1000°C)
UTO Auto-Ranging	•	•	•
ANGE Range Hold	•	•	٠
OLD Data Hold	•	•	•
Diode Test	-	—	٠
Capacitance Test	—	—	4mF
Iz :/ Frequency/Duty Cycle	_	_	10Hz – 1MHz
AXMIN Max/Min Value	MAXÝ MIN×	MAX 🗡 Min 🗙	MAX 🔨 MIN 🗸
Auto Power-Off	•	•	•
LCD Display Count	2000	2000	4000
URABILITY Drop Protection	3.3 ft. (1 m)	3.3 ft. (1 m)	3.3 ft. (1 m)
Safety Rating	CAT III 600V	CAT III 600V	CAT III 600V

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Specifications subject to change.

# DIGITAL CLAMP METERS

	DIGITAL CLAMP	METER	s					
Į.	FEATURES	;	CL110	CL210	CL310	CL600	CL700	CL800
	Durabilit <u>y</u>	y						
k	Drop Pro	tection	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)
	E/& Ingress F	Protection	_	-	_	IP40	IP40	IP40
	A Safety		CAT III 600V	CAT III 600V	CAT III 600V	CAT IV 600V	CAT IV 600V	CAT IV 600V
ľ	<b>V</b> AC Voltag	ge (Volts)	600V	600V	600V	1000V	1000V	1000V
	DC Volta	ge (Volts)	600V	600V	600V	1000V	1000V	1000V
ľ	AC Curre	ent (Amps)	400A	400A	400A	600A	600A	600A
	A DC Curre	ent (Amps)	_	-	_	_	_	600A
	Ω Ohms (R	esistance)	20ΜΩ	20ΜΩ	40ΜΩ	60MΩ	60MΩ	60MΩ
	MV AC Milliv	olts	•	•	-	•	•	•
	nV DC Milliv	olts	•	•	•	•	•	•
I	RMS True RMS	S	_	l	•	•	•	•
	•)) Audible (	Continuity	•	•	•	•	•	•
-	Backlight	t	•	•	•	•	•	•
°	F°C Temperat	ture	_	-40° – 1832°F (-40° – 1000°C)	-40° - 1832°F (-40° - 1000°C)	_	-14° - 1000°F (-26° - 538°C)	-14° – 1000°F (-26° – 538°C)
Ľ	<b>ow</b> Low Imp	edance	_	l	_	_	•	•
N	ICV Non-Con Voltage T	tact Testing	_	-	_	•	•	•
A	UTO Auto Rar	nging	•	•	•	•	•	•
R/	ANGE Range H	old	•	•	•	•	•	•
H	OLD Data Hol	d	•	•	•	•	•	•
	H Diode Te	st	-	-	•	•	•	•
	Capacita	nce Test	-	-	4000 µF	-	6000 μF	6000 µF
H	z% Frequenc	cy / Duty Cycle	-	-	10Hz – 1MHz	-	1Hz – 500 KHz	1Hz – 500 KHz
MA	axmin Max / Mi	n	MAX only	MAX only	•	•	•	•
	G Magnetic	: Mount	-	-	-	Available As Accessory	Available As Accessory	Available As Accessory
	Workligh	t	-	-	_	-	-	•
A	Auto-Pov	wer Off	•	•	•	•	•	•
8	888 LCD Disp	olay Count	2000	2000	4000	6000	6000	6000

### DIGITAL MULTIMETERS



FEATURES	MM300
Durability	CAT
Drop Protection	3.3 ft. (1 m)
E/ Ingress Protection	-
🕂 Safety	CAT III 600V
V AC Voltage (Volts)	600V
DC Voltage (Volts)	600V
AC Current (Amps)	-
A DC Current (Amps)	10A
<b>O</b> hms (Resistance)	2ΜΩ
AC Millivolts	_
mV DC Millivolts	•
<b>mÃ</b> AC Milliamps	_
mÅ DC Milliamps	•
AC Microamps	_
DC Microamps	•
True RMS	-
•)) Audible Continuity	•
Backlight	_
°F°C Temperature	-
z Low Impedance	_
AUTO Auto Ranging	-
RANGE Range Hold	-
HOLD Data Hold	•
Diode Test	•
	-
Hz% Frequency / Duty Cycle	-
Max / Min	-
LEAd Warning	-
IIIII Bar Graph	-
G Magnetic Mount	Available As Accessory
Apo Auto-Power Off	-
Battery Test	•
LCD Display Count	2000

FUNCTIONS & FEATURES

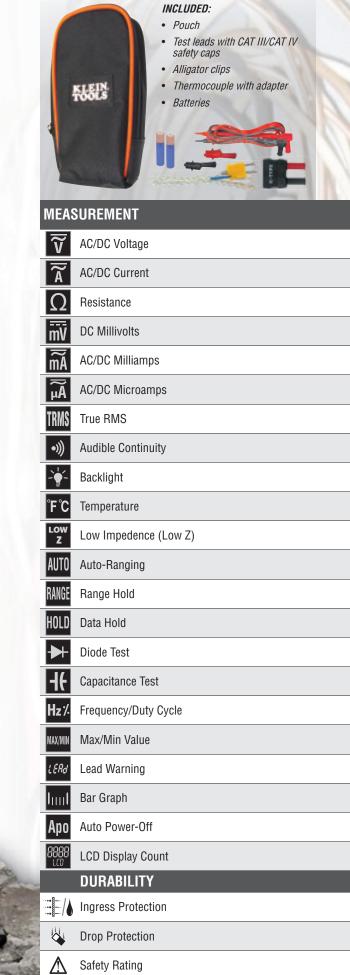
Specifications subject to change.

Pathol		88888
A IN A IN		
	()	C S
	THE THE	Con Holigh
MM400	MM600	MM700
CAT		
3.3 ft. (1 m)	6.6 ft. (2 m)	6.6 ft. (2 m)
_	IP42	IP42
CAT III 600V	CAT IV 600V	CAT IV 600V
600V	1000V	1000V
600V	1000V	1000V
10A	10A	10A
10A	10A	10A
40MΩ	40ΜΩ	40ΜΩ
•	_	
•	•	•
•	•	•
•	•	•
•	•	•
•	•	•
_	_	•
•	•	•
•	•	•
0° – 1000°F (-18° – 538°C)	0° – 1000°F (-18° – 538°C)	0° – 1500°F (-18° – 816°C)
(-10 - 330 0)	(-10 = 330 0)	•
•	•	•
•	•	•
•	•	•
•	•	•
200 µF	1000 µF	4000 µF
1Hz – 50 KHz	1Hz – 500 KHz	1Hz – 500 KHz
•	•	•
_	•	•
-	_	•
Available As Accessory	Available As Accessory	Available As Accessory
•		-10003301 y
_	_	_
4000	4000	4000

FUNCTIONS & FEATURES

Specifications subject to change.





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



Lead storage

Magnetic hanger 69417 (optional)

and the second

	Y Constant	ART.
MM600	MM700	
1000V	1000V	
10A	10A	
40ΜΩ	40ΜΩ	
•	•	
•	•	
•	•	
_	•	
•	•	
00 400005	0. 450005	
0° – 1000°F (-18° – 538°C)	0° – 1500°F (-18° – 816°C)	$\leq$
_	•	
•	•	
•	•	
•	•	
•	•	
1000 µF	4000 µF	
1Hz – 500 KHz	1Hz – 500 KHz	
•	•	
•	•	ERS
_		0,
4000	4000	
4000	4000	1/2 1
IP42	IP42	9
6.6 ft. (2 m)	6.6 ft. (2 m)	
CAT IV 600V	CAT IV 600V	0.12
Enter E	Specifications subject to change.	9



• The	IDED: t leads with CAT III/CAT IV ety caps ermocouple with adapter perature-measuring model only) teries
W.	
MEAS	SUREMENT
ĩ	AC/DC Voltage
Ã	AC Current
Ā	DC Current
Ω	Resistance
mV	DC Millivolts
mĂ	AC Milliamps
mĀ	DC Milliamps
μÃ	AC Microamps
μÄ	DC Microamps
•)))	Audible Continuity
	Backlight
℉℃	Temperature
AUTO	Auto-Ranging
RANGE	Range Hold
HOLD	Data Hold
₩	Diode Test
<b>- +</b>	Capacitance Test
Hz %	Frequency/Duty Cycle
MAX/MIN	Max/Min Value
Apo	Auto Power-Off
TEST	Battery Test
8888 LCD	LCD Display Count
DUR/	ABILITY
	Drop Protection
$\triangle$	Safety Rating
	A REAL PROPERTY AND A REAL

12:88.87	188888	
5454000	MM 400	0
<b>MM300</b> 600V	<b>MM400</b> 600V	
-	10A	
10A	10A	
2ΜΩ	40ΜΩ	
•	•	
_	•	2112
•	•	
_	•	1
•	•	5
•	•	=Ľ
_	•	K
_	0° – 1000°F (-18° – 538°C)	1
_	•	
_	•	
٠	•	
•	•	
_	200 µF	
-	1 Hz – 50 kHz	
—	•	
—	•	
•	-	7
2000	4000	
3.3 ft.	3.3 ft.	L
(1 m) CAT III	(1 m) CAT III	E
600V	600V	
	Specifications subject to change.	h

# DIGITAL MULTIMETERS

### **Non-Contact Voltage Testers**





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

12-48VAC **DUAL RANGE** 48-1000VAG



### **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.







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.





KLEIN TOOL

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.





### **Electrical Test Kit** 69149

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

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



### **Receptacle Testers**

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.

> Conditions indicated: Wiring correct, open ground, reverse polarity, open hot, open neutral,

hot/ground reversed.





**RT110** 

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KLEIN



### 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.

KLEIN

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### **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)

### **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 EST - KITS

# Tested Tough. Trusted Safe.

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KLEIN TOOLS

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



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