



## **Test & Measurement Line**

# Designed by Electricians for Electricians

Klein Tools has been manufacturing professional hand tools for over 150 years. The company is dedicated to providing the best hand tools in the industry and supporting electricians and professional trades people around the world with quality and reliability they can count on everyday. Blending innovation with functionality has built Klein's global reputation as a leading producer of quality products.

The Test & Measurement product line has been exclusively designed from the ground up—by electricians for electricians—working side by side with Klein's team of engineers and product experts. Based on years of field research, combined with extensive input from electricians across America, these meters and testers were specifically loaded with the latest innovative, time-saving features designed to meet and exceed their specific job requirements.





Within each product classification, Klein's meters and testers boast more features than comparable products in the category. That translates to more efficiency on the job, additional benefits to the user, and superior value overall. Some of Klein's innovative features (which vary by model) include:

- Large Backlit Displays
- High Safety Ratings
- Analog Bar Graphs
- Low Impedance
- Magnetic Mounts
- Work Lights
- Unique Hook Design and more!





Pros know that quality and durability matter. Klein knows that electricians have a critical need for accuracy and safety in everything they do. The world today demands time-savings and efficiency on every jobsite. Klein Tools Test and Measurement products deliver!

## **Innovative Features... Superior Value!**



### **Professional Series Multimeters**

- Solid construction and rugged rubber boots.
- Data hold feature saves measurement for later viewing.

### Additional Features for Cat. Nos. MM1000, MM2000

- Bar graph responds quickly to changes in measurement.
- Max / Min / Relative reading for quick troubleshooting in the field.

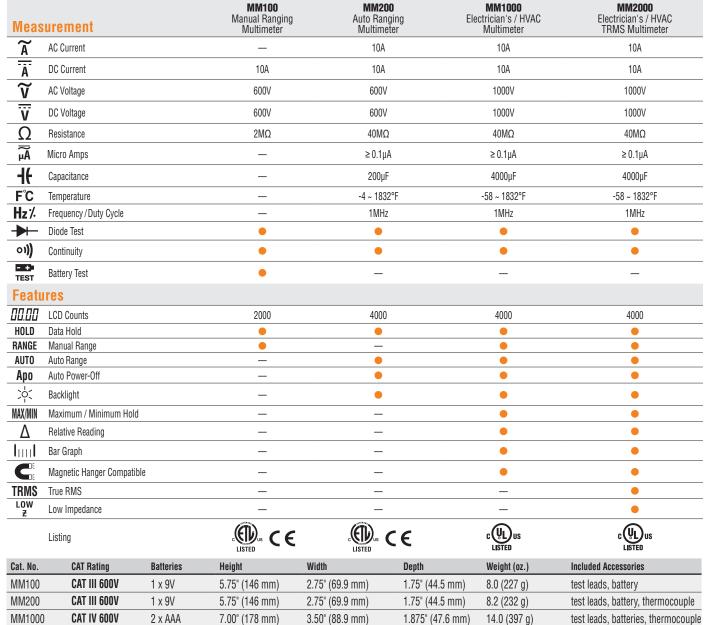












	Cat. No.	Туре
Replacement Fuses	69192	F 440mA / 1000V
for MM1000 and MM2000	69191	F 11A / 1000V

2 x AAA

7.00" (178 mm)

CAT IV 600V



1.875" (47.6 mm)

14.0 (397 g)

test leads, batteries, thermocouple

3.50" (88.9 mm)

MM2000

#### **SELECTION CHART**

**Professional Series Clamp Meters** 

- Large jaw sizes.
- Worklights illuminate dark work spaces.
- Data hold captures measurements in any situation.

**Additional Features for** Cat. Nos. CL1000, CL2000, CL3100

- Built-in magnetic mount for hands-free convenience.
- Quick-response bar graph shows elusive fluctuations.











Measu	ırement	<b>CL100</b> 600A AC Clamp Meter	<b>CL200</b> 600A AC Clamp Meter w/ Temp	<b>CL1000</b> 400A AC Clamp Meter	<b>CL2000</b> 400A AC/DC TRMS Clamp Meter	<b>CL3000</b> 200A AC Fork Meter	<b>CL3100</b> 200A AC Hook Meter
Ã	AC Current	600A	600A	400A	400A	200A	200A
Ā	DC Current	_	_	_	400A	_	_
$\overline{\widetilde{v}}$	AC Voltage	600V	600V	750V	750V	750V	750V
V	DC Voltage	600V	600V	1000V	1000V	1000V	1000V
$\overline{\widetilde{\mu A}}$	Micro Amps	_	_	0.1 ~ 2000μΑ	0.1 ~ 2000μA	_	_
Ω	Resistance	20ΜΩ	40ΜΩ	40ΜΩ	40ΜΩ	40ΜΩ	40ΜΩ
46	Capacitance	_	100μF	4000μF	4000μF	40μF	_
Hz /	Frequency / Duty Cycle	_	100kHz	1MHz	1MHz	100kHz	_
<b>—</b>	Diode Test	•	•	•	•	•	_
01))	Continuity	•	•	•	•	•	•
F℃	Temperature	_	-4 ~ 1832°F	_	_	_	_
NCV	Non Contact Voltage	_	_	•	•	_	_
Featur	res						
00.00	LCD Counts	2000	4000	4000	4000	4000	4000
HOLD	Data Hold	•	•	•	•	•	_
Apo	Auto Power-Off	•	•	•	•	•	_
>\\cdot\	Backlight	•	•	•	•	•	•
	Worklight	•	•	•	•	•	•
RANGE	Auto/Manual Range	•	•	•	•	•	•
MAX	Maximum Hold	•	_	•	•	_	•
MIN	Minimum Hold	_	_	•	•		•
liiil	Bar Graph	_	_	•	•	_	•
C	Magnetic Mount	_	_	•	•	_	•
Δ	Relative Reading	_	_	_	•	_	•
TRMS	True RMS	_	_	_	•	_	_
	Listing	cellisted C €		C UL US	C UL US	cessed c €	C UL US

Cat. No.	CAT Rating	Batteries	Jaw Size	Height	Width	Depth	Weight (oz.)	Included Accessories
CL100	CAT III 600V	3 x AAA	1.0" (25.4 mm)	8.2" (208 mm)	3.0" (76.2 mm)	1.4" (35.6 mm)	9.9 (281 g)	test leads, batteries, case
CL200	CAT III 600V	3 x AAA	1.0" (25.4 mm)	8.2" (208 mm)	3.0" (76.2 mm)	1.4" (35.6 mm)	10.0 (283 g)	test leads, batteries, case, thermocouple
CL1000	CAT III 600V	2 x AAA	1.25" (31.8 mm)	8.875" (225 mm)	3.375" (85.7 mm)	1.5" (38.1 mm)	10.7 (303 g)	test leads, batteries, case
CL2000	CAT III 600V	2 x AAA	1.25" (31.8 mm)	8.875" (225 mm)	3.375" (85.7 mm)	1.5" (38.1 mm)	10.7 (303 g)	test leads, batteries, case
CL3000	CAT III 600V	1 x 9V	0.5" (12.7 mm)	7.50" (191 mm)	2.70" (68.6 mm)	1.70" (43.2 mm)	7.4 (210 g)	test leads, batteries, case
CL3100	CAT IV 600V	2 x AAA	0.5" (12.7 mm)	10.25" (260 mm)	2.50" (63.5 mm)	1.50" (38.1 mm)	8.6 (244 g)	test leads, batteries, case



#### **PROFESSIONAL SERIES MULTIMETERS**

# **Manual Ranging Multimeter**

**MM 100** 

SPEC	IFICATION	MM100
$\widetilde{A}$	AC Current	_
Ā	DC Current	10A
ĩ	AC Voltage	600V
V	DC Voltage	600V
Ω	Resistance	2ΜΩ
$\overline{\widetilde{\mu A}}$	Micro Amps	-
46	Capacitance	_
F℃	Temperature	_
Hz%	Frequency/Duty Cycle	_
<b>→</b> ⊢	Diode Test	•
01))	Continuity	•
TEST	Battery Test	•
	CAT Rating	CAT III 600V
	Listing c	Dus CE
	Dimensions: 5.75" H x 2.75 (146 mm H x 69.9 mm W x	
	Weight: 8.0 oz. (227 g)	









Measure Fuses

Lead Storage



#### **PROFESSIONAL SERIES MULTIMETERS**

## **Auto Ranging Multimeter**

MM 200

Capacitance, Temperature & Frequency

SPEC	CIFICATION	MM200
Ã	AC Current	10A
Ā	DC Current	10A
ĩ	AC Voltage	600V
V	DC Voltage	600V
Ω	Resistance	40ΜΩ
$\widetilde{\widetilde{\mu A}}$	Micro Amps	≥ <b>0.1</b> µA
46	Capacitance	200μF
F℃	Temperature	-4 ~ 1832°F
Hz%	Frequency/Duty Cycle	1MHz
<b>—</b>	Diode Test	•
01))	Continuity	•
TEST	Battery Test	_
	CAT Rating	CAT III 600V
	Listing	central control contr
	Dimensions: 5.75" H x (146 mm H x 69.9 mm	
	Weight: 8.2 oz. (232 g)	









Measure Circuit Breakers

Measure Temperature

Measure Frequency

Backlit Display



#### **PROFESSIONAL SERIES MULTIMETERS**

## **Electrician's / HVAC Multimeter**

**MM 1000** 

SPEC	IFICATION	MM1000
$\widetilde{A}$	AC Current	10A
Ā	DC Current	10A
ĩ	AC Voltage	1000V
V	DC Voltage	1000V
Ω	Resistance	40ΜΩ
$\overline{\widetilde{\mu A}}$	Micro Amps	≥ 0.1µA
46	Capacitance	4000μF
F℃	Temperature	-58 ~ 1832°F
Hz%	Frequency / Duty Cycle	1MHz
$\textcolor{red}{\blacktriangleright}\vdash$	Diode Test	•
01))	Continuity	•
TEST	Battery Test	_
	CAT Rating	CAT IV 600V
	Listing	C UL US
		H x 3.5" W x 1.875" D mm W x 47.6 mm D)
	Weight: 14.0 oz. (3	97 g)





Backlit Display



Measure Large Capacitors



Magnetic Hanger Accessory



SPEC	IFICATION	MM2000
Ã	AC Current	10A
Ä	DC Current	10A
ĩ	AC Voltage	1000V
V	DC Voltage	1000V
Ω	Resistance	40MΩ
$\overline{\widetilde{\mu A}}$	Micro Amps	≥ 0.1µA
46	Capacitance	4000μF
F℃	Temperature	-58 ~ 1832°F
Hz%	Frequency / Duty Cycle	1MHz
<b>→</b> ⊢	Diode Test	•
01))	Continuity	•
TEST	Battery Test	_
	CAT Rating	CAT IV 600V
	Listing	C UL US
	Dimensions: 7.00" H x 3.5" W x 1.875" D (178 mm H x 88.9 mm W x 47.6 mm D)	
	Weight: 14.0 oz. (3	397 g)









Analog Bar Graph



Alligator Clips Attach to Bare Wire



Lead Storage



# **600A AC Clamp Meter**



SPEC	IFICATION	CL100
Ã	AC Current	600A
Ā	DC Current	_
v	AC Voltage	600V
V	DC Voltage	600V
$\overline{\widetilde{\mu A}}$	Micro Amps	_
Ω	Resistance	20ΜΩ
46	Capacitance	_
Hz%	Frequency / Duty Cycle	_
<b>—</b>	Diode Test	•
01))	Continuity	•
F°C	Temperature	_
NCV	Non Contact Voltage	_
	CAT Rating	CAT III 600V
	Listing	ELISTED CE
	Dimensions: 8.2" H x 3.0 (208 mm H x 76.2 mm \	
	Weight: 9.9 oz. (281 g)	





Backlit Display Line Splitter Accessory



### **600A AC Clamp Meter with Temperature**

**CL 200** 

Temperature, Frequency & **Capacitance** 

SPEC	IFICATION	CL200
$\widetilde{A}$	AC Current	600A
Ā	DC Current	_
v	AC Voltage	600V
V	DC Voltage	600V
$\overline{\widetilde{\mu}}\widetilde{A}$	Micro Amps	_
Ω	Resistance	40ΜΩ
46	Capacitance	100μF
Hz%	Frequency /Duty Cycle	100kHz
<b>—</b>	Diode Test	•
01))	Continuity	•
F℃	Temperature	-4 ~ 1832°F
NCV	Non Contact Voltage	_
	CAT Rating	CAT III 600V
	Listing	Dus CE
	Dimensions: 8.2" H x 3.0" W (208 mm H x 76.2 mm W x	
	Weight: 10.0 oz. (283 g)	









Worklight Measure Temperature

Measure Fuses





**CL1000** 

	Large Clamp
	opening
OV T CAT III 400A E	21,000

Non-Contact Voltage Tester

Worklight lights clamp area

 Magnetic Mount secures meter and frees hands

**Side Mounted** 

SPEC	CIFICATION	CL1000
Ã	AC Current	400A
Ā	DC Current	_
v	AC Voltage	750V
V	DC Voltage	1000V
$\overline{\widetilde{\mu A}}$	Micro Amps	0.1 ~ 2000μΑ
Ω	Resistance	40MΩ
46	Capacitance	4000μF
Hz%	Frequency / Duty Cycle	1MHz
<b>→</b> ⊢	Diode Test	•
01))	Continuity	•
F℃	Temperature	_
NCV	Non Contact Voltage	•
	CAT Rating	CAT III 600V
	Listing	C UL US
	Dimensions: 8.875" H x 3. (225 mm H x 85.7 mm W	
	Weight: 10.7 oz. (303 g)	













Worklight

Built-in Magnetic Mount

Non-Contact Voltage Tester

Lead Storage



400A AC/DC True RMS Clamp Meter

**CL 2000** 

True RMS DC Current

Large Clamp

opening

Non-Contact Voltage Tester

SPEC	IFICATION	CL2000
Ã	AC Current	400A
Ā	DC Current	400A
v	AC Voltage	750V
V	DC Voltage	1000V
$\overline{\widetilde{\mu A}}$	Micro Amps	0.1 ~ 2000μΑ
Ω	Resistance	40ΜΩ
46	Capacitance	4000μF
Hz%	Frequency /Duty Cycle	1MHz
<b>—</b>	Diode Test	•
01))	Continuity	•
F℃	Temperature	_
NCV	Non Contact Voltage	•
	CAT Rating	CAT III 600V
	Listing	C UL US
	Dimensions: 8.875" H x 3. (225 mm H x 85.7 mm W	
	Weight: 10.7 oz. (303 g)	



600V € CAT III 400A €









Backlit Display

Analog Bar Graph

DC Amps

Test Lead Holder



SPEC	IFICATION	CL3000
Ã	AC Current	200A
v	AC Voltage	750V
v	DC Voltage	1000V
Ω	Resistance	40MΩ
46	Capacitance	40μF
Hz%	Frequency / Duty Cycle	100kHz
<b>—</b>	Diode Test	•
101	Continuity	•
	CAT Rating	CAT III 600V
	Listing	LISTED CE
	Dimensions: 7.50" H x 2.70 (191 mm H x 68.6 mm W x	
	Weight: 7.4 oz. (210 g)	









Backlit Display

Measure Voltage

Lead Storage



SPEC	IFICATION	CL3100
$\widetilde{A}$	AC Current	200A
ĩ	AC Voltage	750V
V	DC Voltage	1000V
Ω	Resistance	40ΜΩ
46	Capacitance	_
Hz%	Frequency / Duty Cycle	_
<b>→</b> ⊢	Diode Test	_
	Continuity	•
	CAT Rating	CAT IV 600V
	Listing	C UL US
	Dimensions: 10.25" H x 2 (260 mm H x 63.5 mm W	
	Weight: 8.6 oz. (244 g)	

**Auto-Selection** no dial simplifies use

**Display Brighter** than most competitive units

Bar Graph measures fast moving readings



– **Worklight** lights clamp area

Unique Hook Design for tight cabinets

measures 1/0 wire and AC currents up to 200A

Magnetic Mount secures meter and frees hands

Lead Storage protects leads



Separate Tie-wrapped Wires



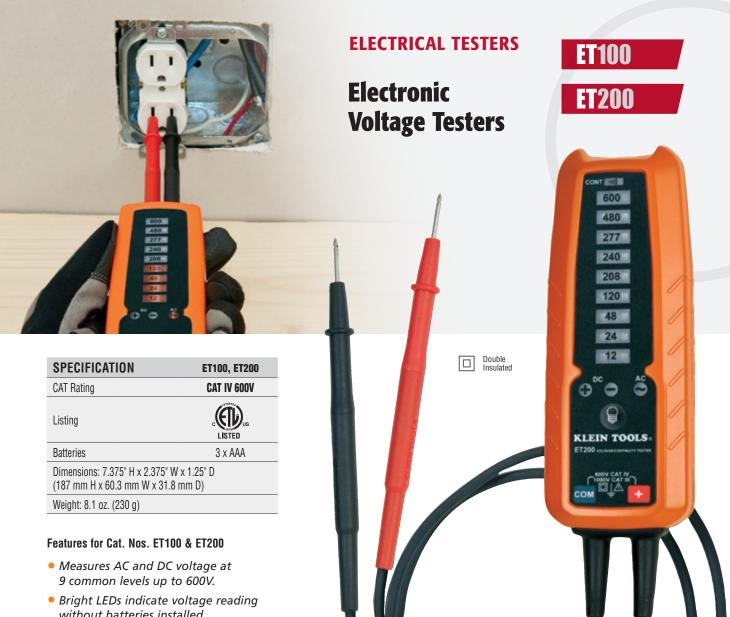
Auto Function Select



Magnetic Mount & Lead Storage



Worklight



- without batteries installed.
- Low impedance input reduces possibility of ghost voltages.
- Permanently secured test leads are always there when they are needed.
- Molded lead holders are perfect for easy measurements of tamper-proof outlets.
- Vibration and sound alerts for dangerous voltage levels.
- Modern solid-state construction provides CAT IV 600V safety rating.

#### Additional Features for Cat. No. ET200

- Bright worklight to illuminate your work space.
- Audible continuity alerts at less than 270k  $\Omega$ .

#### **Standards:**

UL 61010-1 2nd edition UL 61010-31 2nd edition CAN/CSA C22.2 No. 61010-01 CAN/CSA C22.2 No. 61010-031



Measure Tamper-Resistant Outlets



Bright Red LEDs Indicate Voltage



Pictured ET200

Check Circuit Breaker Continuity



Worklight



#### **ELECTRICAL TESTERS**

### Digital Circuit Breaker Finder

ET 300

SPECIFICATION	ET300
Listing	C UL US
Batteries (Receiver)	1 x 9V
Receiver Dimensions: 6" H x 2" W (152 mm H x 50.8 mm W x 22.9 n	
Receiver Weight: 3.2 oz. (90.7 g)	
Transmitter Dimensions: 2.8" H x 1 (71.1 mm H x 48.3 mm W x 30.5 r	
Transmitter Weight: 1.6 oz. (45.4 g	g)

- Quickly, accurately, and automatically find the correct circuit breaker of any standard 120V outlet.
- Does not require interruption of service.
   Power can be left on.
- Bright green arrow and loud beeping tone provide clear indication of correct breaker.
- Strong transmitter reaches distances up to 1000 feet.
- Find breakers of light fixtures and bare wires with optional adapter set (see accessories page).











Light Socket Adapter



SPECIFICATION

Voltage Range

50-1000 Volts AC

Frequency Range

50-500 Hz

CAT Rating

CAT IV 1000V

Listing

CAT IV 1000V

Batteries: Two Alkaline 1.5V AAA or IEC LR03 or NEDA 24A

Dimensions: 5.5" H x 0.72" W x 1" D (140 mm H x 18 mm W x 25 mm D)

Weight: 0.8 oz. (23 g), Weight w/Batteries: 1.6 oz. (46 g)

#### Standards:

UL 61010-1 2nd edition CAN/CSA C22.2 No. 610101-04 EN 61010-1 2nd edition IEC 61010-1:2001 2nd edition ISA-82.02.01 (IEC 61010-1 MOD)

**Patents:**US D583,266 S
US 7,208,932 B1

- Non-contact detection of voltage in cables, cords, circuit breakers, lighting fixtures, switches, outlets, and wires.
- When voltage is detected, a high intensity, bright red LED illuminates and a warning tone sounds.
- Discrete digitally controlled ON/OFF power button.
- Auto power-off feature conserves and extends battery life.
- Microprocessor controlled low-battery indicator and tester shutdown.
- 50 to 1000 Volt AC power operating range allows broad application.
- Lightweight compact design with a convenient clip to fit securely in your pocket.



Green LED Power-On Indicator

#### **A** WARNINGS:

- It is important that users of this tester read, understand, and follow all warnings, cautions, safety information, and instructions in the manual before operating or servicing this tester. Failure to follow instructions could result in death or serious injury.
- Risk of electric shock and burn. Contact with live circuits could result in death or serious injury.
- · Use caution with voltages above 30V AC as a shock hazard may exist.
- A steady red glow and continuous beep indicates voltage present. If no indication, voltage could still be present.
- In bright light conditions, the LED visual indicators will be less visible.
- Do not use if green LED is not illuminated.

#### A WARNINGS:

- Do not use if tester appears damaged or if the tester is not operating properly.
   If in doubt, replace the tester.
- Do not apply more than the rated voltage as marked on the tester (1000 volts AC).
- Always wear approved eye protection.
- Before each use, verify operation by testing a known working circuit that is within the rating of this tester.
- Do not rely on this tester with shielded wire. Operation may be affected by differences in socket design and insulation thickness and type.
- · Comply with local and national safety requirements.
- If this tester is used in a manner not specified by the manufacturer, protection provided by the tester may be affected.

A CAUTION: Do not attempt to repair this tester. It contains no serviceable parts. Do not expose the product to extremes in temperature or high humidity.

## Circuit Breaker Finder Accessory Kit



69411

- For use with ET300 Digital Circuit Breaker Finder.
- Light socket adapter for finding the correct circuit of a lighting fixture.
- Alligator clip adapter enables use of Digital Circuit Breaker Finder on bare wires.

Cat. No.	Description	Weight
69411	ET300 digital circuit breaker finder accessory kit	2.1 oz. (59.5 g)



### **Replacement Test Lead Set**



- Pair of universal test leads includes alligator clips.
- Fits lead storage compartment on the MM1000, MM2000, CL1000, CL2000, and CL3100.
- Also compatible with MM100, MM200, CL100, CL200, and CL3000.

Cat. No.	Description	Weight
69410	universal test lead set w/ alligator clips	3.2 oz. (90.7 g)

### **Magnetic Hanger**



69190

- For use with MM1000 and MM2000 Electrician's Multimeters.
- Clips securely into back of rubber boot.
- Strong magnet attaches securely to metal surfaces for hands-free use.

Cat. No.	Description	Weight
69190	magnetic hanger for electrician's multimeters	1.1oz. (31.2 g)

#### A WARNINGS:

To ensure safe operation and service of the tester, follow these instructions. Failure to observe these warnings can result in severe injury or death.

- Before each use, verify meter operation by measuring a known voltage or current.
- · Never use the meter on a circuit with voltages that exceed the category based rating of this meter.
- · Do not use the meter during electrical storms, or in wet weather.
- · Do not use the meter or test leads if they appear to be damaged.
- · Ensure meter leads are fully seated, and keep fingers away from the metal probe contacts when making measurements.
- Do not open the meter to replace batteries while the probes are connected.
- Use caution when working with voltages above 60V DC, or 25V AC RMS. Such voltages pose a shock hazard.
- To avoid false readings that can lead to electrical shock, replace batteries if a low battery indicator appears.
- Unless measuring voltage or current, shut off and lock out power before measuring resistance or capacitance.
- Always adhere to local and national safety codes. Use individual protective equipment to prevent shock and arc blast injury where hazardous live conductors are exposed.

## **Test & Measurement Line**

Designed by Electricians for Electricians



## KLEIN TOOLS.

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