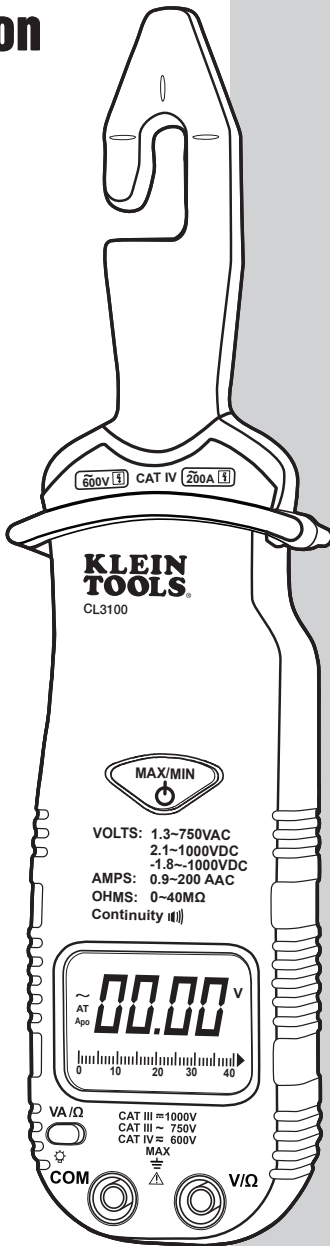


# Instruction Manual

# CL3100

ENGLISH

- BACKLIGHT
- WORKLIGHT
- MAX/MIN
- AUTO FUNCTION SELECT
- 3-3/4 DIGIT  
3999 COUNT LCD



# KLEIN TOOLS®

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ENGLISH

## CL3100

## Instruction Manual

### GENERAL SPECIFICATIONS

The Klein Tools CL3100 is an auto-function selecting hook meter. It measures AC/DC voltage, AC current, and resistance. It can also test continuity.

- **Operating Altitude:** 2000 meters
- **Relative Humidity:** 75% max
- **Operating Temperature:** 0°C/32°F to 40°C/104°F
- **Storage Temperature:** -10°C/0°F to 50°C/122°F
- **Accuracy Temperature:** 18°C/64°F to 28°C/82°F
- **Temperature Coefficient:** 0.1\* (specified accuracy)/°C
- **Sampling Frequency:** 2.5 samples per second
- **Jaw Size:** 0.5"
- **Dimensions:** 10.25" x 2.5" x 1.5"
- **Weight:** 8.6oz.
- **Calibration:** Accurate for one year
- **CAT Rating:** CAT III 1000V, CAT IV 600V
- **Accuracy:** ± (% of reading + # of least significant digits)

### ⚠ WARNINGS

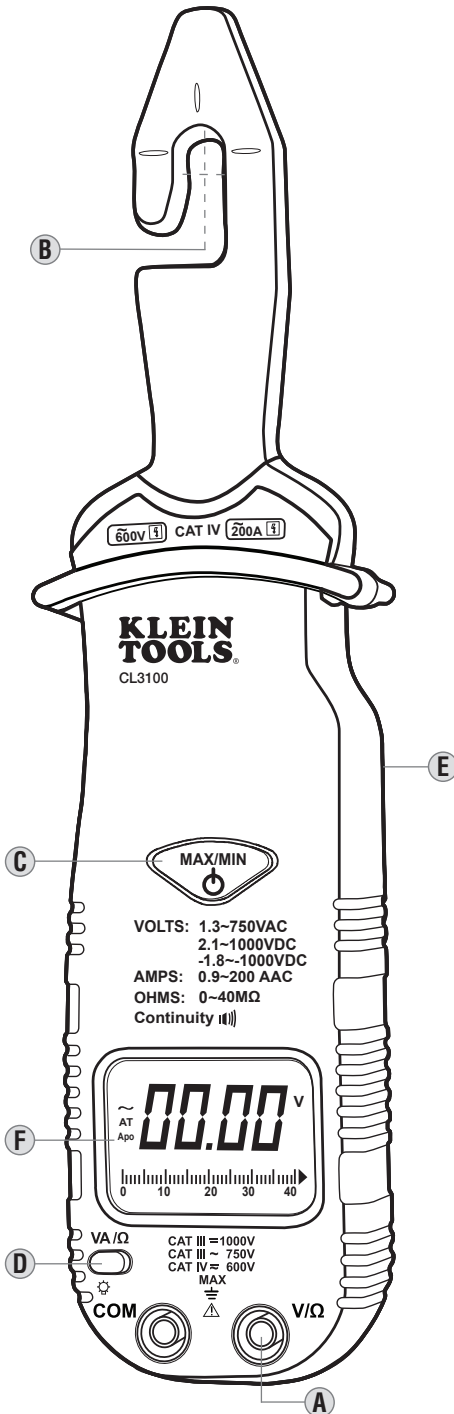
To ensure safe operation and service of the tester, follow these instructions. Failure to observe these warnings can result in severe injury or death.

- 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.

### SYMBOLS

- |  |  |  |                           |
|--|--|--|---------------------------|
|  | AC Alternating Current                   |  | Warning or Caution        |
|  | DC/AC Voltage or Current                 |  | Double Insulated Class II |
|  | DC Direct Current                        |  | Ground                    |
|  | Safe for disconnect from live conductors |  | AC Source                 |

FEATURE DETAILS



Where to Measure

- A. Measure **Voltage, Resistance, and Continuity** here
  - ⚠ Use leads of proper safety rating only (CAT III / CAT IV).
  - ⚠ **Do not** attempt to measure more than 1000V DC or 750V AC.
  - ⚠ **Do not** attempt to measure current with leads.
- B. Measure **Current** here
  - ⚠ Measure up to 200A AC.
  - Measure when display shows **AUTO**.

How to Select a Function or Feature

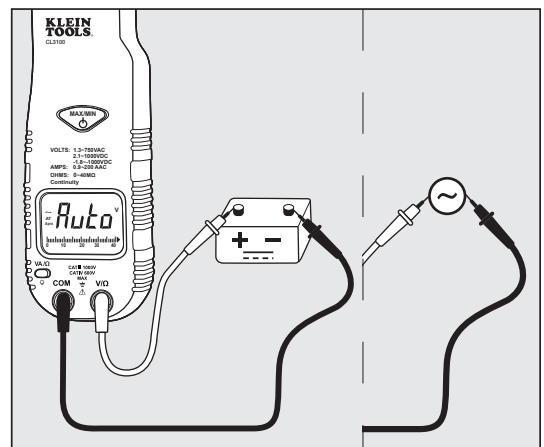
- C. Use to turn instrument **ON / OFF**, or select **MAX / MIN**.
  - Press button for 2 seconds to power on or off.
  - Press repeatedly to switch between maximum and minimum.
  - Press button for 2 seconds to return to live reading from MAX / MIN mode.
- D. Access **Resistance, Continuity, and Backlight** functions here.
  - Press repeatedly to cycle through **AUTO** (V / A), resistance, and continuity modes.
  - Press for 2 seconds to enable/disable backlight and worklight.

Other Things to Note:

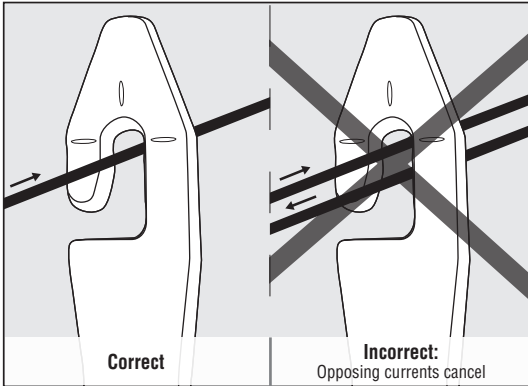
- E. **Magnet and Battery Replacement** are on back.
  - When **+/-** indicator is displayed on the LCD, batteries must be replaced.
  - Turn off device and disconnect leads.
  - Remove the back screw and replace 2 x AAA batteries.
  - Attach magnet to metal surfaces for hands-free use.
- F. Device features **Auto Power-Off (Apo)**
  - After 29 minutes non-use, the instrument will beep 3 times.
  - After 1 more minute, the instrument will beep once and power itself off to conserve battery power.
  - Holding **VA / Ω** button while turning on disables Auto Power-Off.

FUNCTION INSTRUCTIONS

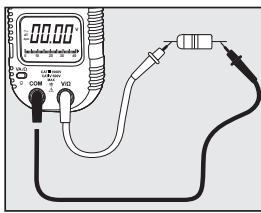
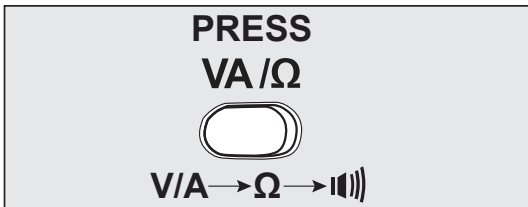
1. Voltage: < 1000 V DC or 750 V AC



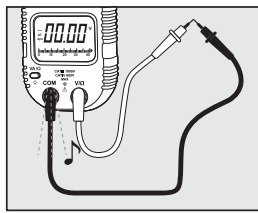
2. Current: < 200A AC



3. Resistance / Continuity



Resistance: < 40MΩ



Continuity: Tone below 30Ω

ELECTRICAL SPECIFICATIONS

DC Voltage Measurement

Range	Resolution	Accuracy
2.1 ~ 1000V	0.001V ~ 1V	± (1.0% + 4 digits)
-1.8 ~ -1000V	0.001V ~ 1V	

Overload Protection: 1000V

Input Impedance: > 10MΩ

AC Voltage Measurement

Range	Resolution	Accuracy
1.3 ~ 750V	0.001V ~ 1V	± (1.5% + 3 digits)

Overload Protection: 750V RMS

Frequency: 45 to 400Hz

Input Impedance: 10MΩ

Response: Averaging

AC Current Measurement

Range	Resolution	Accuracy
0.9 ~ 200A	0.1A	± (2.5% + 8 digits)

Overload Protection: 200A

Frequency: 45 to 400Hz

Response: Averaging

Resistance Measurement

Range	Resolution	Accuracy
400Ω	0.1Ω	± (1.0% + 4 digits)
4kΩ	0.001kΩ	
40kΩ	0.01kΩ	
400kΩ	0.1kΩ	
4MΩ	0.001MΩ	
40MΩ	0.01MΩ	± (2.0% + 4 digits)

Overload Protection: 600V

Continuity Test

Overload Protection	Open Circuit Voltage
600V	Appx. 0.45V

SYMBOLS USED ON LCD

- ~ AC Measurement
- Negative DC Value
- MAX** Maximum Reading
- AT Auto Range Active
- O.L. Overload: Range Exceeded
- V Voltage Measurement
- Ω Resistance in Ohms
- m Milli 10<sup>-3</sup>
- M Mega 10<sup>6</sup>
- DC Measurement
- +** Low Battery
- MIN** Minimum Reading
- AUTO Auto Function Active (V/A)
- Apo Auto Power-Off Active
- A Current in Amps
- ||| Continuity Test
- k Kilo 10<sup>3</sup>

**WARRANTY**

This product is warranted to be free from defects in materials and workmanship for a period of two years from the date of purchase. During this warranty period, Klein Tools has the option to repair or replace or refund the purchase price of any unit which fails to conform to this warranty under normal use and service. This warranty does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect, or improper maintenance. Batteries and damage resulting from failed batteries are not covered by warranty. A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. Klein Tools shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

Some states or countries laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If your Klein product requires repair or for information on how to exercise your rights under the terms of this warranty, please contact Klein Tools at 1-877-775-5346.

**CLEANING**

Turn instrument off and disconnect test leads. Clean the instrument by using a damp cloth. Do not use abrasive cleaners or solvents.

**STORAGE**

Remove the batteries when instrument is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the Specifications section, allow the instrument to return to normal operating conditions before using it.

**DISPOSAL / RECYCLE**

**Caution:** This symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal.

**CUSTOMER SERVICE**

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Lincolnshire, IL 60069  
**1-877-283-6808**  
**[www.kleintools.com](http://www.kleintools.com)**