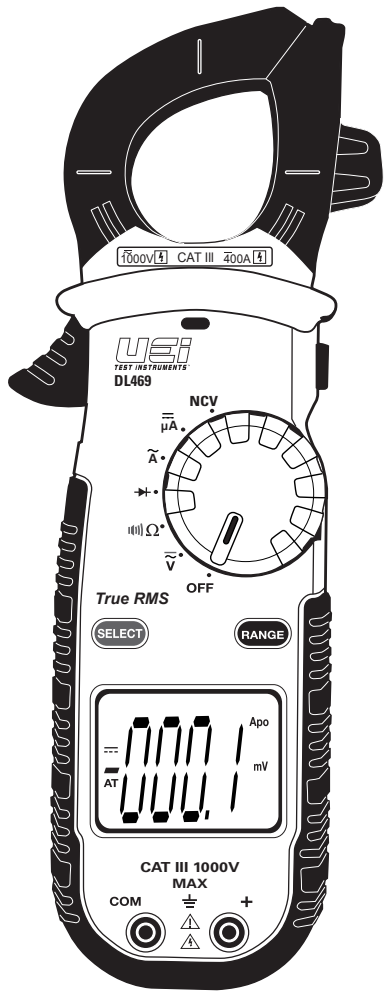
DL469

TEST iNSTRUMENTS™

AC 400A TRMS Clamp Meter

INSTRUCTION MANUAL

ENGLISH



Intertek

1000V CAT III

RoHS Compliant

CE

1-800-547-5740
www.ueitest.com • email: info@ueitest.com

WARRANTY

The DL469 is warranted to be free from defects in materials and workmanship for a period of two years from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UEi 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.

A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge

For more information on warranty and service, contact:

www.ueitest.com • Email: info@ueitest.com
1-800-547-5740

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

DISPOSAL

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

CLEANING

Periodically clean your meter's case using a damp cloth. DO NOT use abrasive, flammable liquids, cleaning solvents, or strong detergents as they may damage the finish, impair safety, or affect the reliability of the structural components.

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 General Specifications section, allow the instrument to return to normal operating conditions before using it.

FEATURES

- True RMS
- 400A AC
- 750V AC / 600V DC
- Resistance 40MΩ
- DC Microamps 2000µA
- Diode test
- Non-contact voltage detection
- Data hold
- Manual ranging option
- Worklight
- Audible voltage indicator
- Auto power off (See select button)
- Low battery indicator
- Overmolded grip
- Test lead storage
- Battery compartment latches
- Auto-calibration

GENERAL SPECIFICATIONS

- **Operating Temperature:** 32˚ to 104˚F (0˚ to 40˚C)
- **Storage Temperature** 14˚ to 122˚F (-10˚ to 50˚C)
- **Operating Humidity:** <75%
- **Operating Altitude:** 6,562 ft (2,000m)
- **Pollution Degree:** 2
- **Display:** 3 - 3/4" digit, 4000 count
- **Refresh Rate:** 3/sec
- **Over-range:** "OL" is displayed
- **Dimensions:** 8.85" X 3.3" X 1.55"
- **Item Weight:** 0.65 lb
- **Calibration:** Recommended Annually
- **CAT Rating:** CAT III 1000V
- **Certifications:** cETLus 3rd Edition, CATIII 1000V, IEC 61010-1, 61010-2-032, 61010-2-033, CSA C22.2, NO. 61010-1, 61010-2-032, 61010-2-033, 6' Drop Protection, RoHS Compliant, CE Conformity
- **Battery Type:** (AAA) X 2
- **Test Leads:** Test lead w/Alligator Clips
- **Accuracy:** ± (% of reading + # of least significant digits)

IMPORTANT SAFETY WARNINGS

⚠ **WARNING**

Read entire Safety Notes section regarding potential hazards and proper instructions before using this meter. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.

⚠ **WARNING**

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

⚠ **WARNING**

- 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 this meter during electrical storms or in wet weather.
- Do not use the meter or test leads if they appear damaged.
- Ensure meter leads are fully seated and keep fingers away from the metal probe contact when making measurements. Always grip the leads behind the finger guards molded into the probe.
- 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 shock hazards.
- 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 lockout power before measuring resistance or capacitance.
- Always adhere to national and local safety codes. Use proper personal protective equipment (PPE) to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Always turn off power to a circuit or assembly under test before cutting, unsoldering or breaking the current path. Even small amounts of current can be dangerous.
- Always disconnect the live test lead before disconnecting the common test lead from the circuit.
- In the event of electrical shock, ALWAYS bring the victim to the emergency room for evaluation, regardless of victim's apparent recovery. Electrical shock can cause unstable heart rhythms that may need medical attention.
- If any of the following occur during testing, turn off the power source to the circuit being tested: arching, flame, smoke, extreme heat, smell of burning materials or discoloration or melting of components.

⚠ **WARNING**

Higher voltages and currents require greater awareness of physical safety hazards. Before connecting the test leads, turn off power to the circuit under test, set meter to the desired function and range, connect the test leads to the meter first, then connect to the circuit under test. Reapply power. If an erroneous reading is observed, disconnect power immediately and recheck all settings and connections.

⚠ **WARNING**

This meter is designed for trade professionals who are familiar with the hazards of their trade. Observe all recommended safety procedures that include proper lock-out utilization and use of personal protective equipment that includes safety glasses, gloves and flame resistant clothing.

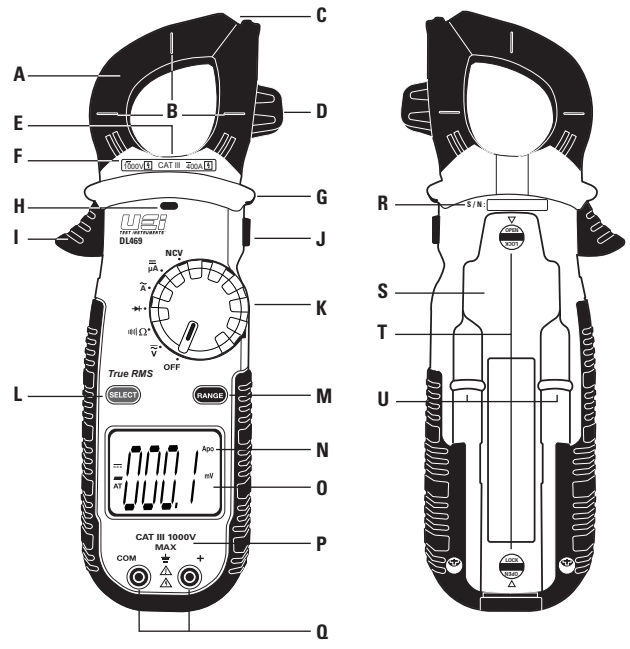
SYMBOLS

~	AC (Alternating current)	⎓	DC (Direct current)
≂	AC/DC Voltage	⎓	Negative DC
AT	Auto-ranging	OL	Overload: Range Exceeded
Apo	Auto power off Active	HOLD	Hold/Capture Value
▭	Low Battery	A	Amperage
V	Voltage	NCV	Non-Contact Voltage
Ω	Ohms/Resistance	µA	MicroAmps
▶|	Diode	ϟ	High Voltage Indication
)))	Continuity	M	Mega (x10^{6} or 1,000,000)
m	Milli (x10^{-3} or 0.001)	k	Kilo (x10^{3} or 1,000)
⏚	Ground	µ	Micro (x10^{-6} or 0.000001)
⚠	Dangerous Levels	⚠	Warning or Caution
▣	Double Insulation (Protection to Class II)	ϟ	Safe for disconnect from live conductors

CATEGORY DEFINITIONS

Measurement Category	Short-Curcuit (typical) kA[a]	Location in the building installation
II	< 10	Circuits connected to mains socket outlets and similar points in the MAINS installation
III	< 50	Mains distributions parts of the building
IV	> 50	Source of the mains installation in the building

OVERVIEW



A. Clamp: Measure inductive AC current. Opens to 1.25" (31.7mm).

B. Conductor Alignment Marks: Used to aid the visual alignment of a conductor when measuring inductive amperage. Greatest accuracy is achieved when the conductor inside the clamp is centered at the intersection of these marks.

C. Wire Separation Tab/NCV sensor: Used to isolate an individual wire from a bundle for testing. NCV sensor detects live voltage.

D. Test Lead Holder: Used for hand-free use of the test probes.

E. Worklight: Lights clamp area in dark work environments.

F. Category Max Indicator: Maximum CAT Rating for Clamp/jaw.

G. Hand Guide: Used as a point of reference for the operator's safety.

H. NCV Alert Light: Indicates voltage when in NCV mode.

I. Clamp Lever: Opens and closes current clamp jaw. Do not allow fingers or objects to become pinched in the base as the jaw closes.

J. Hold Button
- Press to hold the reading on the display. Press again to return to live reading.
- Press and hold to turn on Worklight. Press and hold again to turn off.

K. Function Dial: Turns on meter and is used to select the function.

L. Select Button
- Used to choose measurement mode from a single dial selection; AC or DC volts, Resistance or Continuity.
- Press and hold the button while turning the meter on to disable Apo (auto power off).

M. Range Button:
- Press repeatedly to cycle through manual ranges
- Press and hold to return to auto ranging mode
- AT is displayed on LCD only during auto ranging mode

N. Apo: Auto power off after 30 minutes of use. Press and hold "select" button while turning the meter on to disable Apo. (Auto power off)

O. Display:
- High contrast display.

P. Category Max Indicator: Maximum CAT Rating for input jacks.

Q. Input Jacks: Multifunction and Common jacks
- Multifunction input port used for measuring: AC or DC volts, Resistance, Continuity, Diode and DC µA.
- Use CAT III test leads or higher.

R. Serial Number

S. Battery Cover: Easy access for replacing batteries.

T. Battery Cover Latches: Convenient, quick opening

U. Test lead holders: For storing test leads when not in use.

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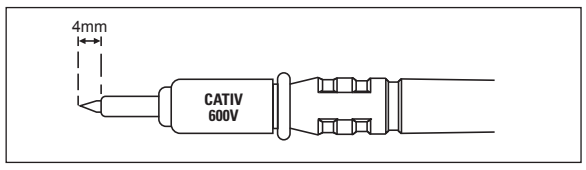
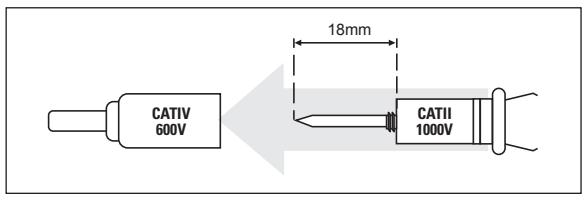
Test Lead Notes

Cat IV and CAT III Measurement Locations



- Ensure the test lead shield is pressed firmly in place. Failure to use the CAT IV shield increases arc-flash risk.

CAT II Measurement Locations

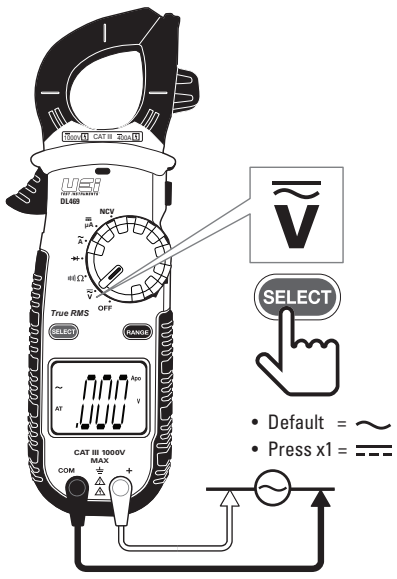


- CAT IV shields may be removed for CAT II locations. This will allow testing on recessed conductors such as standard wall outlets. Take care not to lose the shields.

⚠ **WARNING:** Test Lead category protections apply only to test leads and should not be confused with the meter's specific CAT rating. Observe the maximum category protection indicated on the meter the test leads are plugged into.

⚠ **CAUTION**: If the test leads need to be replaced, you must use a new one which should meet EN 61010-031 standard, rated CATIII 1000V or better.

AC/DC Voltage: <750V AC/600V DC



⚠ **WARNING**

- **Use CAT III rated Test leads or higher.**
- **Do not attempt to measure more than 750V AC/600V DC.**
- **Keep hands below line when measuring high current levels.**
- Do not exceed 600 volts AC or DC – RMS at either the common or multifunction input ports as measured from earth ground.

⚠ **WARNING**

- High Voltage indicator will display and audible alert will sound over 600V AC/DC and High Voltage indicator will display (without audible alert) over 30V AC/DC.

Select AC or DC Voltage.

Features: RANGE HOLD

DC Volts

Range	Resolution	Accuracy	Overload Protection
400mV	0.1mV	±(0.8% + 5 dgts)	1000V RMS
4V	1mV		
40V	10mV		
400V	100mV		
600V	1V	±(1.0% + 5 dgts)	

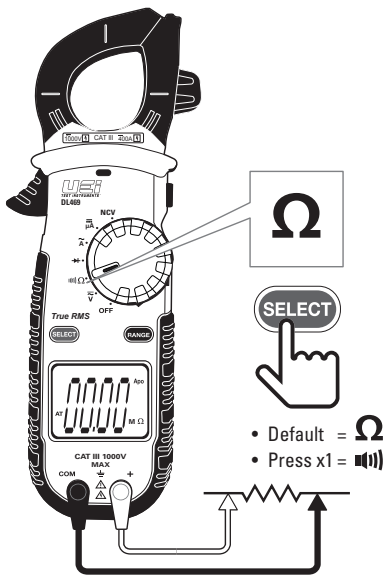
AC Volts (45Hz to 400Hz)

Range	Resolution	Accuracy	Overload Protection
400mV	0.1mV	±(1.0% + 8 dgts)	1000V RMS
4V	1mV		
40V	10mV		
400V	100mV		
750V	1V	±(1.2% + 8 dgts)	

True RMS Frequency Range: Square 50Hz to 170Hz
Sine 50Hz to 400Hz

Bandwidth: Sine = 0.5% error at 1.5kHz (max)
Square = 0.5% error at 0.1kHz (max)
Triangle = 0.5% error at 1.2kHz (max)

Resistance: <40MΩ



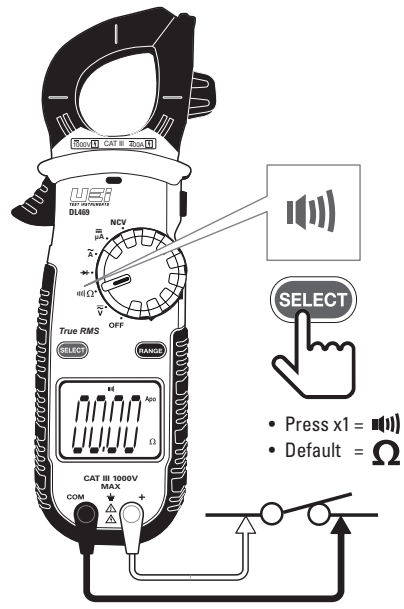
Features: RANGE HOLD

⚠ **WARNING**

- **Do not measure resistance on a live circuit.**

Range	Resolution	Accuracy	Overload Protection
400Ω	0.1Ω	±(1.0% +5 dgts)	600V RMS
4kΩ	1Ω		
40kΩ	10Ω		
400kΩ	100Ω		
4MΩ	0.001MΩ		
40MΩ	0.01MΩ	±(1.5% +5 dgts)	

Continuity



- Buzzer sounds at less than 40Ω.

⚠ **WARNING**

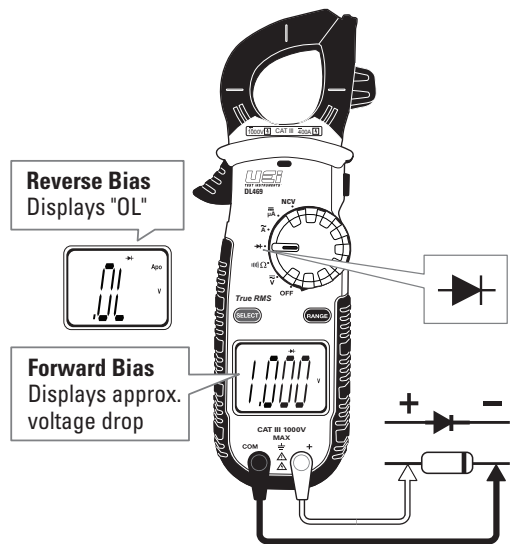
- **Do not measure resistance on a live circuit.**

Features: HOLD

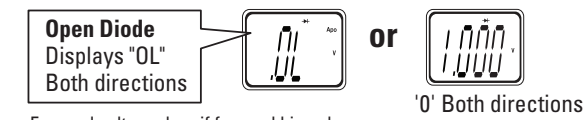
Open Circuit V	Response Time	Overload Protection
<1.0V	<50ms	600V RMS

Diode

GOOD DIODE



BAD DIODE

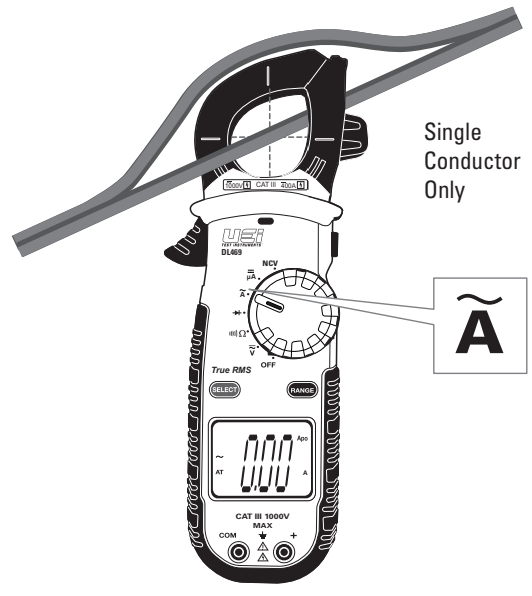


- Forward voltage drop if forward biased.
- "O.L." if reverse biased.

Features: HOLD

Range	Open Circuit V	Test Current	Overload Protection
4.0V	<3.0V DC	1.30mA	600V RMS

AC Amps: < 400A



- Center wire in conductor alignment marks for best accuracy.
- Opposing currents cancel *(use line-splitter when necessary).*

⚠ **WARNING**

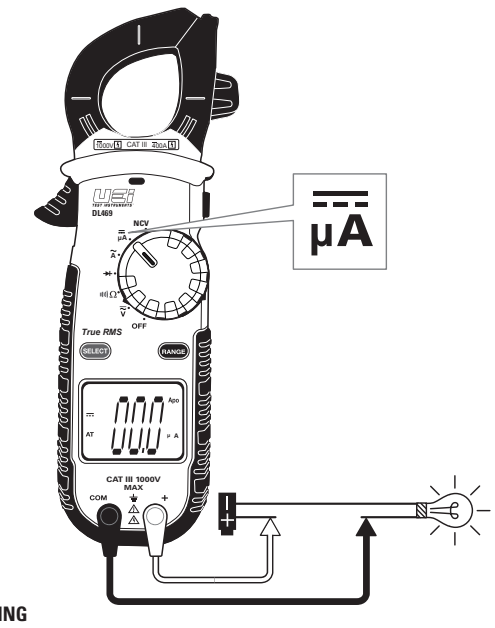
- **Keep hands below guard when measuring high current levels.**
- Do not attempt to measure more than 400A AC

Features: RANGE HOLD

Range	Resolution	Accuracy	Overload Protection
40A	0.01A	±(3.0% +10 dgts)	400A/600V RMS
400A	0.1A	±(2.5% +10 dgts)	

True RMS Frequency Range: Sine 50Hz to 400Hz
Frequency width: 60Hz to 400Hz: 5% to 95%
Frequency width: 400Hz to 4kHz: 15% to 85%

DC Low Amps: < 2000µA



⚠ **WARNING**

- **Keep hands below guard when measuring high current levels.**
- Do not attempt to measure more than 2000µA DC

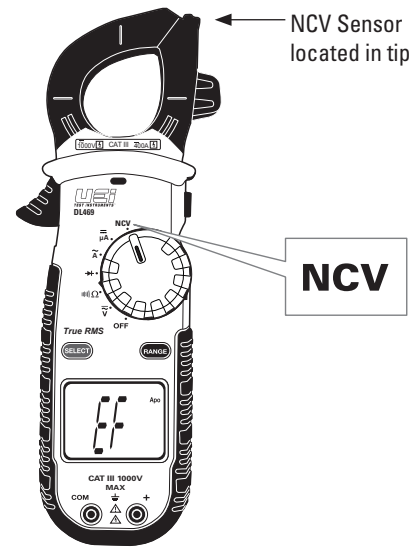
Features: RANGE HOLD

DC Low Amps – Test Lead input

Range	Resolution	Accuracy	Overload Protection
400µA	0.1µA	±(1.2% +3 dgts)	2000µA/600V RMS
2000µA	1µA		

True RMS: 45Hz to 400Hz

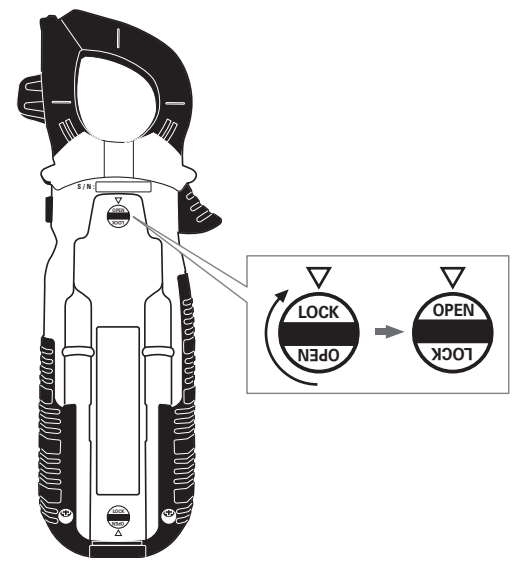
Non-Contact Voltage Measurement



- Select NCV and move the tip of the clamp meter near the voltage source. Both an Audible and Visual alert will indicate voltage.
- Non-Contact Voltage Detection is used to detect power with the sensor located at the tip of the clamp head
- Do not use non-contact voltage detector to determine if there is current in the wire. Detection operation could be affected by socket design, insulation thickness, type and other factors.
- Voltage indicator light may also light when voltage is present on the meter's input jack or from external interference sources such as motors, flashlights, etc.

On Voltage
Approx. 25V AC

Battery Replacement



- When the batteries are too low for safe operation, the Low Battery indicator will display.
- Rotate latches until Unlock symbols are aligned with arrows. Remove battery cover.
- Replace the old batteries with 2 new (AAA) batteries.
- Replace the battery cover
- Rotate latches until the lock symbols are aligned with arrows.