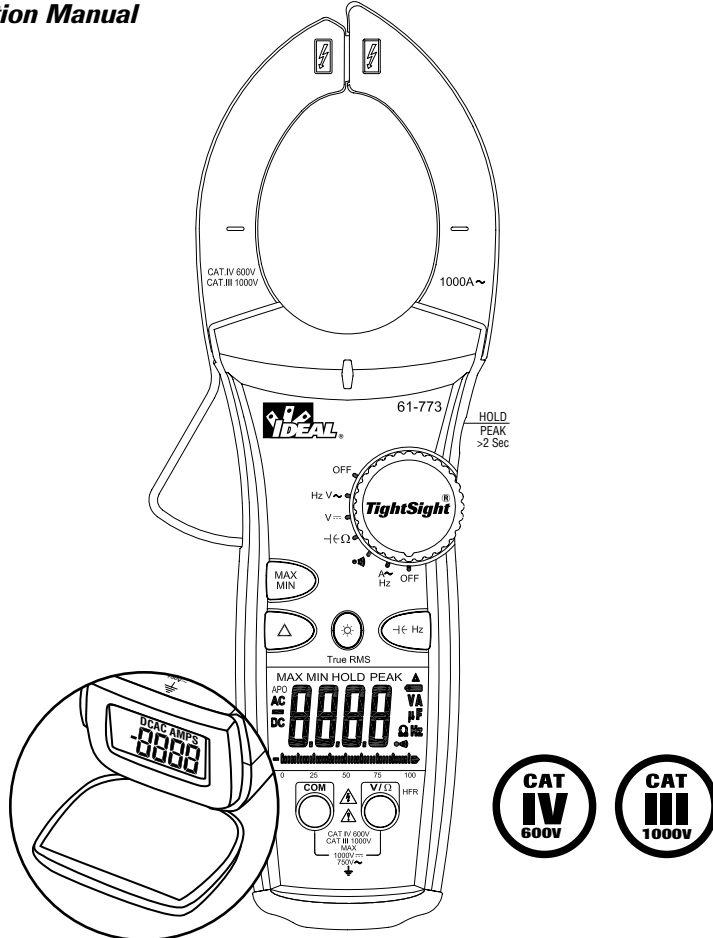




#61-773
#61-775

1000A TRMS Clamp Meters w/TightSight™ Display

Instruction Manual



TightSight™ Display

! Read First: Safety Information

Understand and follow operating instructions carefully. Use the meter only as specified in this manual; otherwise, the protection provided by the meter may be impaired.

! WARNING

To avoid possible electric shock, personal injury or death, follow these guidelines:

- Do not use if meter appears damaged. Visually inspect the meter to ensure case is not cracked and back case is securely in place.
- Inspect and replace leads if insulation is damaged, metal is exposed, or probes are cracked. Pay particular attention to the insulation surrounding the connectors.
- Do not use meter if it operates abnormally as protection maybe impaired.
- Do not use during electrical storms or in wet weather.
- Do not use around explosive gas, dust, or vapor.
- Do not apply more than the rated voltage to the meter.
- Do not use without the battery and the back case properly installed.
- Replace battery as soon as battery indicator appears to avoid false readings.
- Remove the test leads from the circuit prior to removing battery cover.
- Do not attempt to repair this unit as it has no user-serviceable parts.

CAUTION

To protect yourself, think "Safety First":

- Voltages exceeding 30VAC or 60VDC pose a shock hazard so use caution.
- Use appropriate personal protective equipment such as safety glasses, face shields, insulating gloves, insulating boots, and/or insulating mats.
- Before each use:
 - Perform a continuity test by touching the test leads together to verify the functionality of the battery and test leads.
 - Use the 3 Point Safety Method. (1) Verify meter operation by measuring a known voltage. (2) Apply meter to circuit under test. (3) Return to the known live voltage again to ensure proper operation.
- Use the proper terminals, functions and range for your measurements.
- Never ground yourself when taking electrical measurements.
- Connect the black common lead to ground or neutral before applying the red test lead to potential voltage. Disconnect the red test lead from the voltage first.
- Always work with a partner.
- When using the probes, keep fingers as far behind the probe tips as possible.

770 Series Common Features:

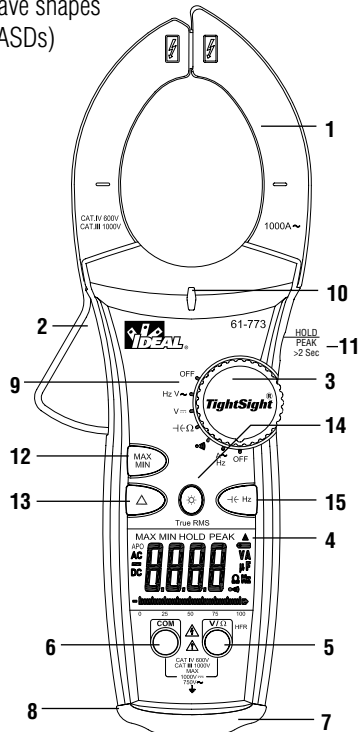
- Large numbers and symbols displayed
- TightSight™ bottom display
- Visual and *selectable* audible indication when voltage is present
- Measures 1000 AAC Current
- Measures 1000 DCA Current (61-775)
- Measures AC/DC Voltage, Resistance & Capacitance
- Audible continuity
- Bright, bold backlight
- Peak, max/min, data hold
- Selectable Auto power off and low battery indicator
- Tapered jaws for reaching into tight spaces
- Hook tip for easier wire separation
- Protective rubber boot (bottom)
- Electronic overload protection on all ranges
- Cat IV-600V/Cat III-1000V

Model Specific Features:

- 61-773 model is true rms sensing
- 61-775 model is true rms sensing, measures DC current
- Both models employ a High Frequency Reject (HFR) circuit to filter noise or help in making accurate measurements on complex wave shapes like those found on Adjustable Speed Drives (ASDs)

Features

1. Tapered jaws w/hook tip
2. Lever
3. Function Dial
4. Main Display (LCD)
5. Volts and resistance (V-Ω) input terminal
6. Common (COM) input terminal
7. TightSight™ bottom display
8. Protective rubber boot
9. Measuring Functions
10. High Voltage (Hi-V) warning
11. Data Hold & Peak
12. Max/min
13. Relative (61-773)
Relative/Zero (61-775)
14. Backlight
15. Capacitance (⌚) / Frequency (Hz)

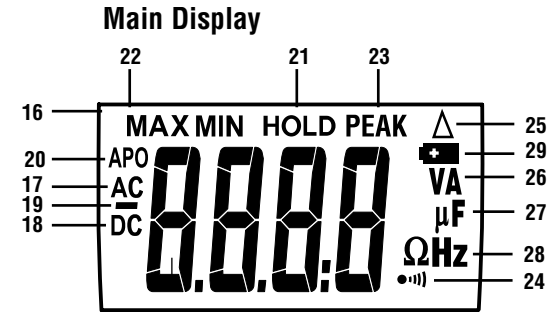


Symbols on the Unit

- Warning - read the instruction manual
- Cat IV - 600V Safety category
- Cat III - 1000V Safety category

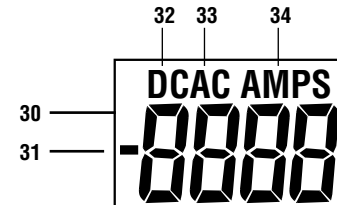
Main Display Icons

16. 9999 count display
17. AC measurement
18. DC measurement
19. Polarity indicator for DC
20. Auto Power Off (APO)
21. Data Hold
22. Max/min
23. PEAK
24. Audible continuity
25. Relative
26. Amps/Volts
27. Farads
28. Ohms/Hz
29. Low battery indicator



TightSight™ Display Icons

30. 9999 count display
31. Polarity indicator for DC
32. DC measurement
33. AC measurement
34. Amps



OPERATION:

High Voltage Warning (HI-V)

The meter beeps and lights an LED when measuring > 30V AC on the VAC function and >30V DC when on the VDC function.

Notes: This feature does not work in the Ohm, capacitor, continuity or clamp modes. Audible indication can be disabled by pressing and holding the Max/min button while turning the function switch from OFF to any desired Function. Wait for **Hb** to be displayed and then release the button. To enable, turn the unit off and back on.

Data Hold Feature

Press the Hold button on the side of the meter to toggle in and out of the data hold mode. "HOLD" appears in the upper left of the meter display when data hold is active. Use the data hold feature to lock a measurement reading on the display. Press the Hold button again to unlock the display and obtain a real-time reading.

Peak Feature

In PEAK mode, the meter displays the PEAK value of AC Volts or Current measurement. PEAK function is enabled by depressing the PEAK HOLD button for > 2 seconds. To Exit PEAK Mode Depress the PEAK HOLD button again for > 2 seconds.

Max/Min Feature

The Max/Min records the maximum and minimum measured value. Press the Max/Min button to activate this feature and to toggle between max, and Min readings. The unit will continually capture max and min values over time. Depressing the max/min button for >2 sec. exits the mode. Note: To record max/min values over a time period >30 min, the Auto Power Off (APO) feature must be defeated.

Relative Mode

Press the "Δ" button to enter the Relative mode. The "Δ" symbol is displayed, and the value on the display is subtracted and stored as a reference value. In the Relative mode, the value shown on the display is always the difference between the stored reference value and the present reading. Press the "Δ" button again for > 2 seconds to exit the Relative mode.


Zero Feature (61-775 model only)

The "ZERO" button is used to zero out the display before measuring DC current. Press the "ZERO" button to subtract out the non-zero number. Then, measure the DC amps. Pressing the "ZERO" button again causes the "ZERO" to flash and the original offset number to be displayed. Depress the "ZERO" button for >2 sec. to exit this mode.

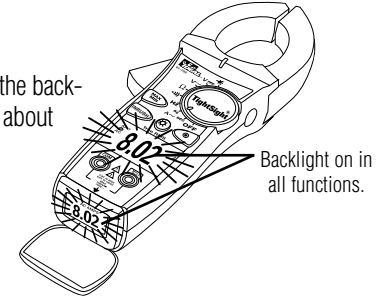
Auto Power Off (APO) Feature

The meter automatically powers itself down after about 30 minutes of no use. Press any button, and the meter will wake up and display the last reading taken before power down. To Disable APO, press and hold the (Hz) button while turning the dial to any desired function. When APO is defeated, the "APO" will be removed from the display. Turning the meter off and back on will restore the APO default.

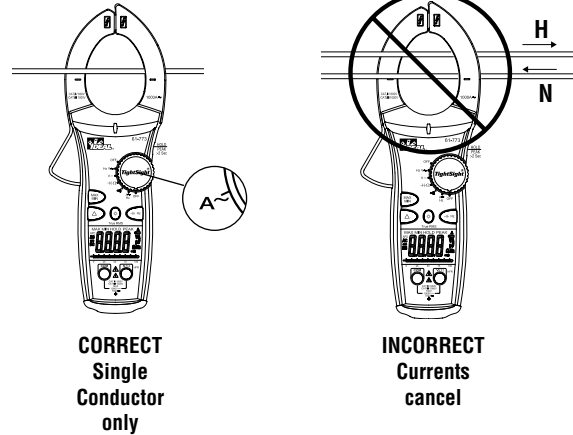
Backlight

Press the  button in the middle of the meter to turn the backlight on and off. The green backlight will remain lit for about 3 minutes before it automatically turns off to conserve battery power.

Note: Backlight consumes 4x the battery power.

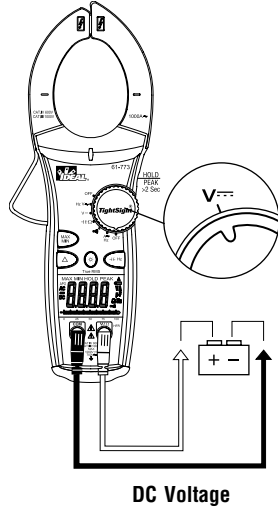
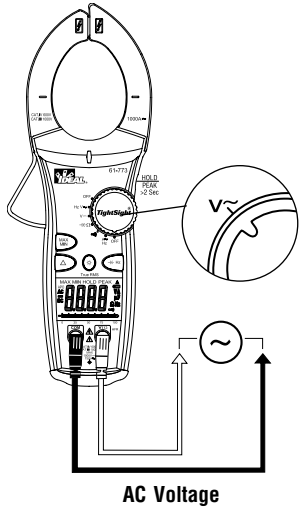


Measuring AC Current (Amps):



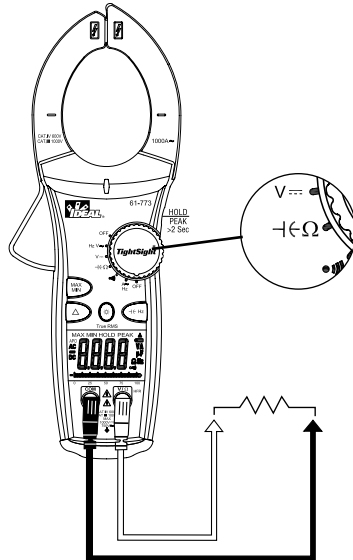
Note: 61-775 model also measures DC Current.

Measuring Voltage:



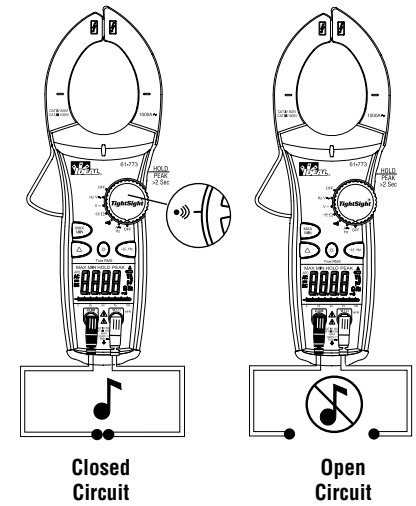
Measuring Resistance (Ohms):

- Verify the circuit is de-energized to obtain accurate measurements.

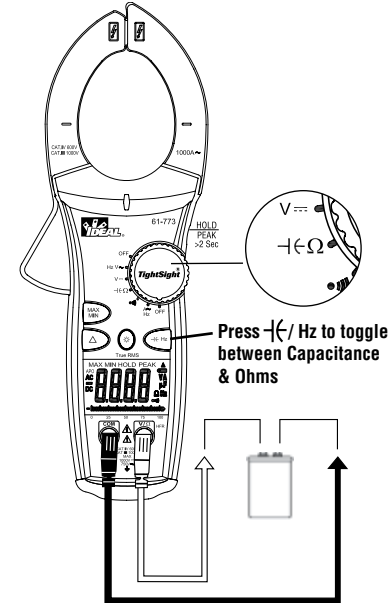


Verifying Continuity (•••••) :

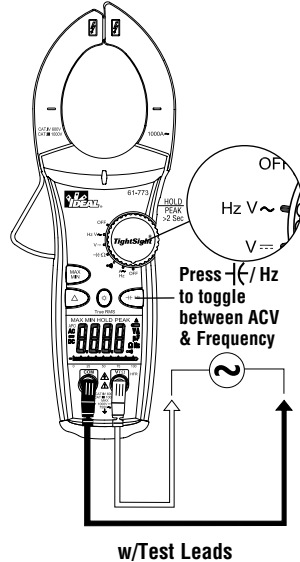
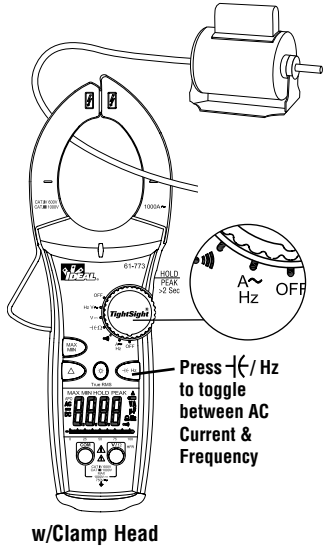
- Verify the circuit is de-energized.
- The meter will sense the level of resistance and beep if the resistance is less than 30 Ω to confirm that continuity is present.



Measuring Capacitance

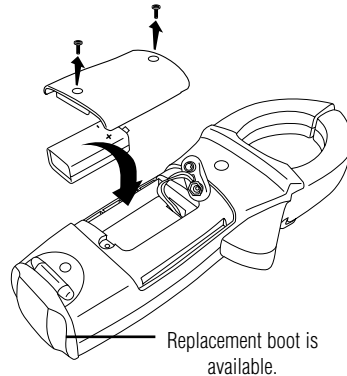


Measuring Frequency 61-773, 61-775



Battery Replacement:

- Ensure test leads are disconnected from circuit or components.
- Remove test leads from input jacks on meter.
- Remove the two screws from the battery cap.
- Remove the battery cap.
- Replace battery with a new 9V battery.
- Assemble the battery cap to the meter and re-tighten the screws.



Maintenance:

Clean the case with a damp cloth and mild detergent. Do not use abrasives or solvents.

Service and Replacement Parts:

This unit has no user-serviceable parts.

For replacement parts or to inquire about service information contact IDEAL INDUSTRIES, INC. at 1-877-201-9005 or visit our website www.testersandmeters.com.

Specifications:

Displays:	4 digit LCD with 9999 counts for both displays with 41 segment
Backlight:	Green illumination with auto-off after 3 minutes
Polarity:	Automatic, positive implied, negative (-) polarity indication.
Overrange:	"OL" indication is displayed.
Zero:	Automatic
Display (Measure) Rate:	Display updates 2 times per second, nominal.
Auto Power Off:	After 30 minutes of non-use.
Battery Life:	100 hours continuous with Alkaline (61-773, 61-775)
Low Battery Indication:	The "■" appears in the display with insufficient voltage for about one hour. Then "bAtt" then displays for 5 seconds and unit powers down. Indicator duration varies by battery brand.
Power Supply:	(1) 9V battery (NEDA 1604, JIS 006P, IEC 6F22) With an isolated battery compartment.
Accuracy:	Stated accuracy at 23°C ±5°C, <75% R.H.
Temperature	0.1 x (specified accuracy) per °C,
Coefficient:	(0°C to 18°C, 28°C to 50°C).
Altitude:	6561.7 ft. (2000m)
Operating Environment:	32°F to 122°F (0°C to 50°C) at < 70% R.H.
Display Environment:	-4°F to 158°F (-20°C to +70°C)
Storage Environment:	-4°F to 140°F (-20°C to 60°C) at < 80% R.H. with battery removed from meter
Jaw Opening:	2.0" (51mm) conductor
Dimensions:	10.6"H x 4.1"W x 1.9"D (270mmH x 103mmW x 48.5mmD)
Weight:	1.1 lbs. (500g) including battery
Accessories included:	Carrying Case, Test Leads with alligator clip, (1) 9V battery, operating instructions.
Safety:	Complies with UL61010-1 (Second Edition), IEC 61010-2-032, IEC 61010-031, EN61010-1, EN61010-2-032, EN61010-031 specifications, CAN/CSA C22.2 no. 1010.1-92 and CAN/CSA C22.2 No. 1010.2.032-96 Cat IV-600V/Cat III-1000V.



Instrument has been evaluated and complies with insulation category IV (overvoltage category IV). Pollution degree 2 in accordance with IEC-644. Indoor use.

Ranges & Accuracies:

AC Converter: 61-773, 61-775 models are true rms sensing.

Accuracy: Accuracy is specified as +/- (a percentage of the reading + a fixed count) at 23°C±5°C (73.4°F ± 9°F), less than 75% relative humidity.

Temperature Coefficient: 0.1 times the applicable accuracy specification per degree C from 0°C to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F)

Function	Range and Resolution	Accuracy		Input Protection
		61-773	61-775	
AC Current ¹	0.0 to 999.9A	2.0% + 5 (45Hz to 60Hz)	2.0% + 5 (20Hz to 100Hz)	1000A AC
		6.0% + 5 (60Hz to 400Hz)	6.0% + 5 (100Hz to 400Hz)	
DC Current ¹	0.0 to 999.9A	N/A	2.0% + 5	1000A DC (61-775 only)
AC Voltage ^{1,2}	0.0 to 600.0V	1.0% + 5 (45Hz to 100Hz)	1.0% + 5 (20Hz to 100Hz)	1000VDC / 750VAC RMS
	600.0 to 750.0V	1.5% + 5 (45Hz to 100Hz)	1.5% + 5 (45Hz to 100Hz)	
	0.0 to 750.0V	6.0% + 5 (100Hz to 400Hz)	6.0% + 5 (100Hz to 400Hz)	
DC Voltage ²	0.0-600.0V	1.0% +5	1.0% +5	1000VDC / 750VAC RMS
	600.0 to 999.9V	1.5% + 5	1.5% + 5	
Resistance ³	0.0 to 999.9Ω	1.5% + 5	1.5% + 5	600V DC/AC RMS
	1000 to 9999Ω			
Capacitance	0.0 to 999.9μF	5.0% +15	5.0% +15	600V DC/AC RMS
Continuity	0.0 to 999.9Ω	Audible at < 30 Response time 500mS	Audible at < 30 Response time 500mS	600V DC/AC RMS
Frequency ⁴	20.0 to 400.0 Hz	0.5% + 5	0.5% + 5	1000VDC / 750VAC RMS

*Accuracy stated for crest factor ≤ 1.5 at full scale and ≤ 3 at half scale.

PEAK:

¹For VAC/A AC/DC (45-65 Hz) has accuracy of ±(5% rdg + 15 digits); minimum input for VAC > 10V and for A AC/DC > 10A; response time > 1ms.

²Input impedance: 1MΩ.

³Open circuit voltage ≈ 1.2V DC

⁴Frequency Sensitivity: 5V rms on AC VOLTS range (≥5AAC at 20 to 100Hz) (≥10AAC at 100 to 400Hz), Frequency can be measured through clamp head

Dispose of waste electrical and electronic equipment



In order to preserve, protect and improve the quality of environment, protect human health and utilize natural resources prudently and rationally, the user should return unserviceable product to relevant facilities in accordance with statutory regulations. The crossed-out wheeled bin indicates the product needs to be disposed separately and not as municipal waste.



Disposal of used batteries/accumulators!

The user is legally obliged to return used batteries and accumulators. Disposing used batteries in the household waste is prohibited! Batteries/accumulators containing hazardous substances are marked with the crossed-out wheeled bin. The symbol indicates that the product is forbidden to be disposed via the domestic refuse. The chemical symbols for the respective hazardous substances are **Cd** = Cadmium, **Hg** = Mercury, **Pb** = Lead.



You can return used batteries/accumulators free of charge to any collecting point of your local authority, our stores, or where batteries/accumulators are sold. Consequently you comply with your legal obligations and contribute to environmental protection.

Warranty Statement:

This tester is warranted to the original purchaser against defects in material and workmanship for two years from the date of purchase. During this warranty period, IDEAL INDUSTRIES, INC. will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction. This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.

Any implied warranties arising out of the sale of an IDEAL product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer 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.

State 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.

Warranty does not cover batteries.