

Part No. 6552

LASER[®]

AC/DC Digital Clamp Meter

CAT III 1000A

Instructions



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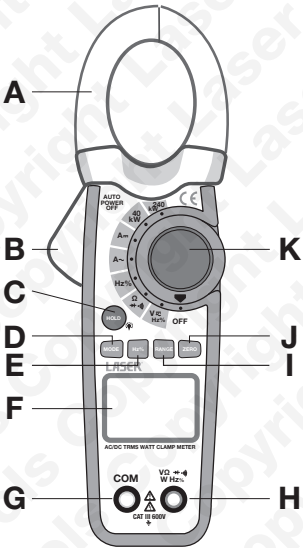
Introduction

The Laser 6552 is a versatile instrument and ideal for use in the installation, maintenance or checking of AC or DC electrical systems and equipment. Capable of measuring AC and DC current of up to 1000 amps, AC and DC voltage of up to 600 volts and AC and DC power (wattage) up to 240 kW. It is also capable of measuring resistance, diode function, continuity, frequency, and duty cycle with inputs of up to 250 volts AC or DC. Measurements are taken with the current clamp, the test leads, or a combination of both.

Input Limits

Function	Maximum Input
DC / AC Watts	240KW
Amps AC, Amps DC	1000A
Volts DC, Volts AC	600V DC/AC
Resistance, Diode, Continuity, Frequency, Duty Cycle, Test	250V DC/AC

Components



Ref.	Description
A	Current Clamp
B	Clamp release trigger
C	Data HOLD and backlight
D	MODE select button
E	Hz% button
F	LCD display
G	COM input jack
H	V Ω Hz jack
I	RANGE select button
J	ZERO button
K	Rotary function switch

Display

Refer to Fig. 1: The clear LCD digital display shows symbols corresponding to the function selected by the rotary function switch and (in the Ω and V function positions), the mode and range selected. DC or AC is shown as is a low battery power meter symbol.

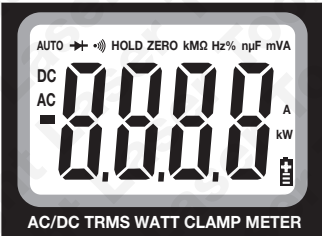


Fig. 1

Instructions

Read and understand all the warnings and precautions listed in the **Precautions** section of this instruction booklet prior to using the digital clamp meter. Set the rotary function switch to OFF when the meter is not in use.

RANGE button: Auto Range and Manual Range:

When first switched on, the meter is in the auto ranging mode; this automatically selects a measurement range based on voltage present. Press the **RANGE** button (I), to change to manual ranging. Each press of the **RANGE** button will step to the next range as indicated by the units displayed and the position of the decimal point. Manual ranging does not function in current, wattage, frequency, diode and continuity check functions.

Test Leads:

- First insert the black lead into the **COM** jack.
- Next insert the red lead into the **VΩ** jack.
- When finished, remove the leads in reverse order: red first, then black.
- When testing, connect the black lead first, red lead second.
- Ensure that the test leads are **disconnected** from the meter before making **current clamp** measurements.

CAUTION: Do not let fingers touch the lead tips. Do not allow the tips to contact one another.

Current Measurement (AC):

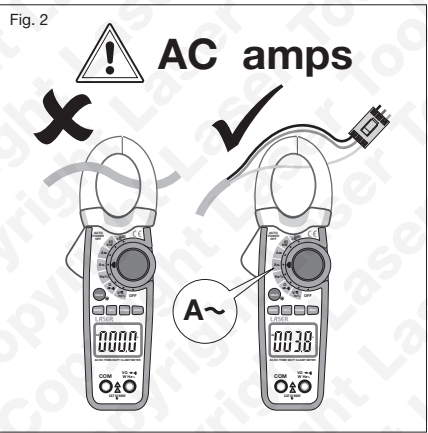
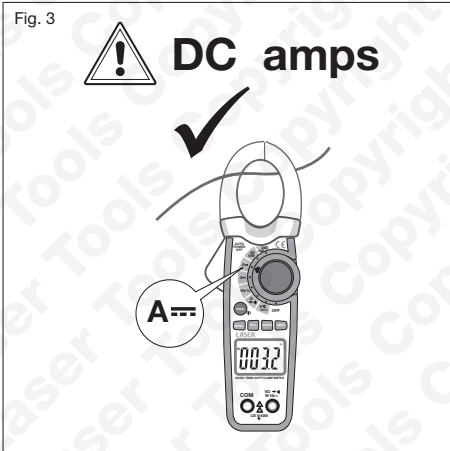


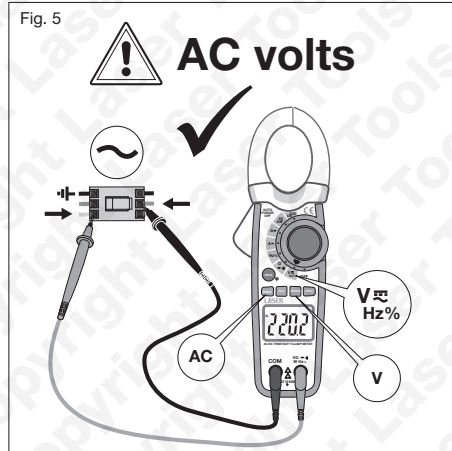
Fig. 2

Introduction

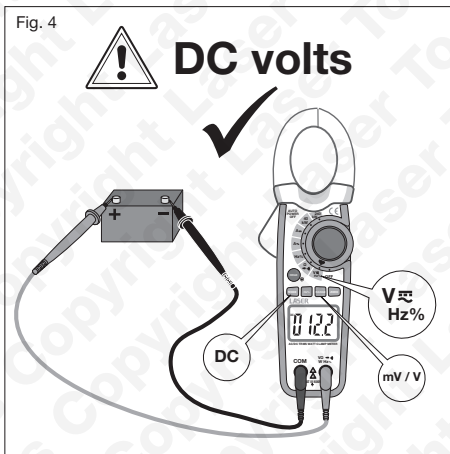
Current Measurement (DC):



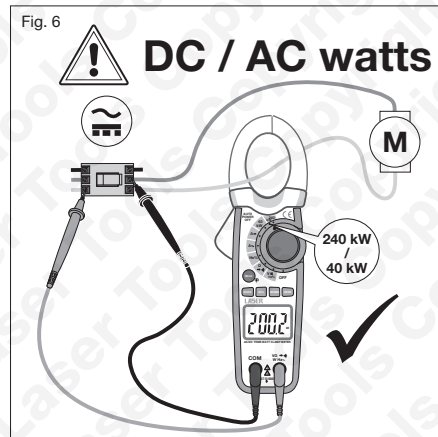
Voltage Measurement (AC):



Voltage Measurement (DC):



DC and AC Power (wattage) Measurement:



Instructions

Resistance and Continuity Measurements:

- With test leads attached, set rotary function switch (K) to Ω position.
- Use MODE button (D) to select resistance (Ω) on display.
- Disconnect one side of component to be tested.
- Touch test probes across the circuit of component to test and read off resistance figure from display.
- For continuity, if the resistance is less than $< 100\Omega$, tone will sound.

Diode Measurements:

- With test leads attached, set rotary function switch (K) to \rightarrow position.
- Use MODE button (D) to select diode \rightarrow on display.
- Touch test probes to the diode to be tested. Forward voltage will indicate 0.4V to 0.7V. Reverse voltage will display OL.
- Shorted devices will indicate 0mV and an open device will indicate OL in both directions.

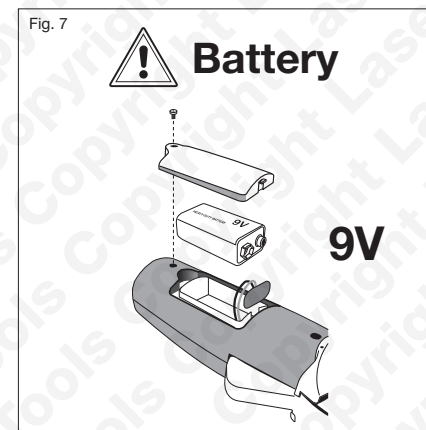
Frequency and % Duty Cycle Measurements:

- With test leads attached, set rotary function switch (K) to V position.
- Select Hz or % Duty with the Hz% button (E).
- Touch test probes to the circuit under test and read off frequency from display.

Data Hold and Backlight:

- To hold (freeze) the LCD reading, press the Data HOLD button (C). The HOLD icon appears on the display. This stable measurement can be viewed after the measurement is complete. Press the HOLD button again to return to normal operation.
- The backlight function illuminates the display in low light conditions. To turn on, press and hold the HOLD button for one second. Press and hold again to switch off.
- The normal HOLD feature works as normal when the backlight is switched on.

Battery Replacement



Precautions

Improper use of this meter can cause damage, shock, injury or death. Read and understand this instruction leaflet before operating the meter.

- Do not exceed the maximum allowable input range of any function.
- Do not apply voltage to the meter when resistance function is selected.
- Set the rotary function switch to OFF when the meter is not in use.
- Set functions to the appropriate position before measuring.
- When measuring volts do not switch to current or resistance modes.
- When changing ranges using the RANGE selector switch, always disconnect the test leads from the circuit under test.
- Use great care when making measurements if the voltages are greater than 25V AC rms or 35V DC; these voltages are considered a shock hazard.
- Always discharge capacitors and remove power from the device under test before carrying out diode, resistance or continuity tests.

Inspect the condition of the test leads and the meter itself for any wear or damage before operating the meter. Repair or replace any wear or damage before use. Remove the battery if the meter is to be stored for long periods.

Specifications

Clamp size:	Opening 1.2" (30mm) approx
Diode Test:	Test current of 0.3mA typical; Open circuit voltage 1.5V DC typical.
Continuity Check:	Threshold <100Ω; Test current < 1mA
Low Battery Indication:	Symbol on LCD display
Overrange Indication:	"OL" is displayed
Measurements Rate:	2 per second, nominal
Input Impedance:	7.8MΩ (VDC and VAC)
Display:	4000 counts LCD
AC Current:	50/60Hz True RMS (AAC)
AC Voltage Bandwidth:	50/60Hz True RMS (VAC)
Operating Temperature:	14 to 122°F (-10 to 50°C)
Storage Temperature:	-22 to 140°F (-30 to 60°C)
Relative Humidity:	90%(0°C to 30°C); 75%(30°C to 40°C); 45%(40°C to 50°C)
Altitude Operating:	3000m; Storage 10,000m
Over voltage:	Category III 600V
Battery:	One 9V battery
Auto OFF:	approx. 35 minutes
Dimensions/Weight:	229mm x 80mm x 49mm /303g
Safety:	For indoor use and in accordance with Overvoltage Category II, Pollution Degree 2. Category II includes local level, appliance, portable equipment, etc., with transient overvoltages less than Overvoltage Cat. III.

Specifications

Function	Range & Resolution	Accuracy (% of reading)
DC Current	1000 ADC	± (1.8% + 5 digits)
AC Current	1000 AAC	± (2.0% + 5 digits)
DC Voltage	400.0 mVDC	± (0.8% + 3 digits)
	4.000 VDC	± (1.5% + 3 digits)
	40.00 VDC	± (2.0% + 3 digits)
	400.0 VDC 600 VDC	
AC Voltage	400.0 mVAC	± (0.8% + 20 digits)
	4.000 VAC	± (1.8% + 5 digits)
	40.00 VAC	
	400.0 VAC 600 VAC	± (2.5% + 5 digits)
Resistance	400.0 Ω	± (1.0% + 4 digits)
	4.000KΩ	± (1.5% + 2 digits)
	40.00KΩ	
	400.0KΩ	± (2.5% + 3 digits)
Frequency	4.000MΩ	
	40.00MΩ	± (3.5% + 5 digits)
	5.000Hz	±(1.2% reading + 2 digits) Sensitivity: 10Vrms min.
	50.00Hz	
	500.0Hz	
	5.000kHz	
	50.00kHz	
Duty Cycle	100.0kHz	
	0.5 to 99.0%	±(1.2% reading + 2 digits)
Pulse width: 100µs - 100ms, Frequency: 5.000Hz ~ 100.0kHz		
AC WATT (0-250 V,0-400A, 50/60Hz TRMS)	40KW	± (2.5% + 5 digits)
AC WATT 0-600V,0-400A, 50/60Hz TRMS)	240KW	± (2.5% + 5 digits)
DC WATT (0-250 V,0-400A)	40KW	± (2.0% + 5 digits)
DC WATT (0-250 V,0-400A)	240KW	± (2.0% + 5 digits)

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It is our policy to continually improve our products and thus we reserve the right to alter specifications and components without prior notice. It is the responsibility of the user to ensure the suitability of the tools and information prior to their use.



Safety First. Be Protected.

**RoHS
Compliant**



Note: Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.



Guarantee

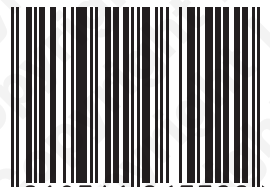
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