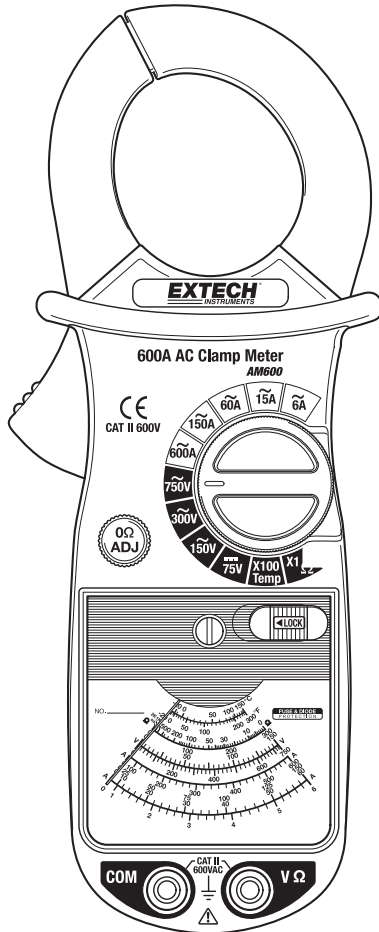


User's Guide

EXTECH[®]
INSTRUMENTS

Extech AM600 600A AC Analog Clamp Meter



Introduction

Congratulations on your purchase of the Extech AM600 Analog Clamp Meter. This device measures AC Current, AC Voltage, DC Voltage, Resistance and Temperature. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Safety

International Safety Symbols



This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.



This symbol, adjacent to a terminal, indicates that, under normal use, hazardous voltages may be present



Double insulation (Protection Class II)

SAFETY NOTES

- Do not exceed the maximum allowable input range of any function.
- Do not apply voltage to meter when resistance function is selected.
- Remove the battery if meter is to be stored for longer than 60 days.

WARNINGS

- Set function switch to the appropriate position before measuring.
- When measuring volts do not switch to current/resistance modes.
- Do not measure current on a circuit whose voltage exceeds 600V.
- When changing ranges always disconnect the test leads from the circuit under test.

CAUTIONS

- Improper use of this meter can cause damage, shock, injury or death. Read and understand this user manual before operating the meter.
- Always remove the test leads before replacing the battery or fuses.
- Inspect the condition of the test leads and the meter itself for any damage before operating the meter. Repair or replace any damage before use.
- Use great care when making measurements if the voltages are greater than 25 VAC rms or 35 VDC. These voltages are considered a shock hazard.
- Always discharge capacitors and remove power from the device under test before performing Resistance tests.
- Voltage checks on electrical outlets can be difficult and misleading because of the uncertainty of connection to the recessed electrical contacts. Other means should be used to ensure that the terminals are not "live".
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Function	Maximum Input
A AC	600 A
V AC	750 V
V DC	75 V

PER IEC1010 OVERVOLTAGE INSTALLATION CATEGORY

OVERVOLTAGE CATEGORY I

Equipment of OVERVOLTAGE CATEGORY I is equipment for connection to circuits in which measures are taken to limit the transient overvoltages to an appropriate low level.
Note – Examples include protected electronic circuits.

OVERVOLTAGE CATEGORY II

Equipment of OVERVOLTAGE CATEGORY II is energy-consuming equipment to be supplied from the fixed installation.
Note – Examples include household, office, and laboratory appliances.

OVERVOLTAGE CATEGORY III

Equipment of OVERVOLTAGE CATEGORY III is equipment in fixed installations.
Note – Examples include switches in the fixed installation and some equipment for industrial use with permanent connection to the fixed installation.

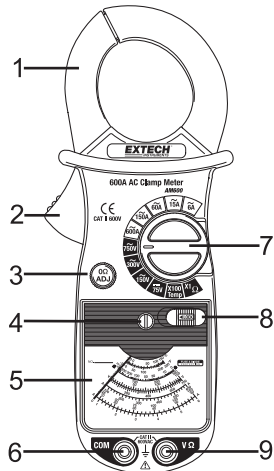
OVERVOLTAGE CATEGORY IV

Equipment of OVERVOLTAGE CATEGORY IV is for use at the origin of the installation.
Note – Examples include electricity meters and primary over-current protection equipment

Description

Meter Description

1. Current clamp
2. Clamp opening trigger
3. 0 Ohms adjustment
4. Meter zero adjustment
5. Scale
6. “COM” Terminal
7. Range switch
8. Pointer Lock switch
9. V, Ω and Temp Terminal



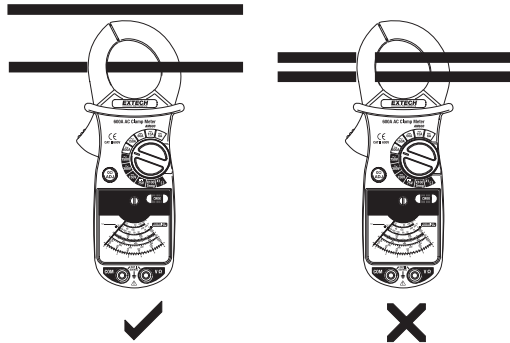
Operation

NOTE: Read and understand all **Warning** and **Caution** statements in this operation manual prior to using this meter.

AC Current Measurements

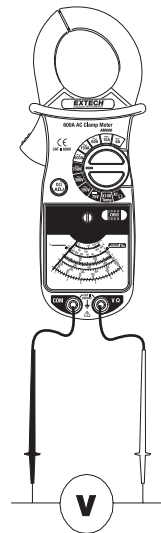
WARNING: Remove the test leads from the meter before making current clamp measurements.

1. Set the Range switch to the **600A** range..
2. Set the Pointer Lock switch is set to the right-most position so that the pointer may freely move.
3. If necessary, turn the Zero Adjust screw to zero the meter display.
4. Press the trigger to open jaw. Fully enclose only one conductor. For optimum results, center the conductor in the jaw.
5. The analog display pointer will indicate the current reading.
6. When possible, set the Range switch to a lower range to obtain a reading in the upper half of the scale.



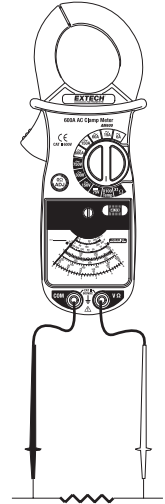
AC/DC Voltage Measurements

1. Insert the black test lead into the negative **COM** terminal and the red test lead into the positive **V** terminal.
2. Set the Range switch to the highest AC or DC Voltage range.
3. Set the Pointer Lock switch is set to the right-most position so that the pointer may freely move.
4. If necessary, turn the Zero Adjust screw to zero the meter display.
5. Connect the test leads in parallel to the circuit under test.
6. The analog display pointer will indicate the voltage reading.
7. When possible, set the Range switch to a lower range to obtain a reading in the upper half of the scale.



Resistance Measurements

1. Insert the black test lead into the negative COM terminal and the red test lead into the OHMS positive terminal.
2. Set the Range switch to the **X1 Ω** or **X100 Ω** position as needed.
3. Set the Pointer Lock switch is set to the right-most position so that the pointer may freely move.
4. With the test leads open, adjust the meter zero so that the pointer is over the ∞ symbol.
5. Touch the test lead tips together and adjust the 0 Ohms adjust until the pointer is over the 0 ohms position.
6. Touch the test probe tips across the circuit or component under test.
7. The analog display pointer will indicate the resistance reading.



Temperature Measurements

Zero procedure (fig. 1)

1. Insert the temperature probe black plug into the **COM** terminal and the Probe tip into the **V Ω** terminal.
2. Adjust the pointer for a 0 Ω scale reading

Measurements (fig. 2)

1. Insert the temperature probe black plug into the **COM** terminal and the red plug into the **V Ω** terminal.
2. Place the temperature probe into the area to be tested.
3. Read the temperature on the $^{\circ}\text{C}$ or $^{\circ}\text{F}$ temperature scale

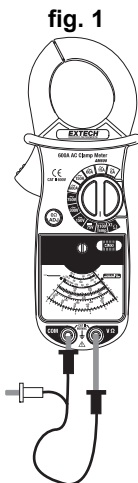


fig. 1

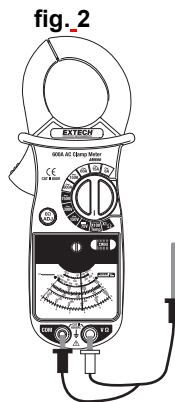


fig. 2

Pointer Lock Function

The Pointer Lock switch freezes the pointer's position and is used as a 'data hold' feature. This feature is useful in dimly lit or hard to reach locations.

Specifications

Function	Ranges	Accuracy
AC Current (50/60Hz)	6, 15, 60, 150 A	± 3% of Full Scale
	600 A	± 5% of Full Scale
AC Voltage (50/60Hz)	150, 300 and 750V	± 3% of Full Scale
DC Voltage	75 V DC	± 3% of Full Scale
Resistance	2000 Ω (50 Ω mid-scale) (Rx1)	± 3% of Full Scale Length
	200 kΩ (5 kΩ mid-scale) (Rx100)	
Temperature	-4 to 302°F (-20°C to 150°C)	± 3% of arc

Clamp jaw opening	1.3" (34 mm) max.
Display	Analog with Zero Adjustment
Input Impedance	ACV: 2 kΩ/V, DCV: 4.5 kΩ/V
AC bandwidth	50 / 60 Hz
Temperature Probe	Thermistor
Operating conditions	Temperature 32 - 104°F (0 - 40°C); Relative Humidity <80%
Operating Altitude	7000 ft. (2000 m) maximum.
Battery	One (1) 1.5V 'AA' Battery
Fuse	500 mA, 250V fast
Dimensions & Weight	8.4 x 3.4 x 1.7" (214 x 85 x 43 mm); 12.4 oz. (350 g)
Safety	For indoor use and in accordance with the requirements for double insulation to IEC1010-1 (2001); EN61010-1 (2001) Overvoltage Category II 600V, Pollution Degree 2.
Standards	CE

Maintenance

WARNING: To avoid electrical shock, disconnect the meter from any circuit and remove the test leads from the input terminals before opening the case. Do not operate the meter with an open case.

Cleaning and Storage

Periodically wipe the case with a damp cloth and mild detergent; do not use abrasives or solvents. If the meter is not to be used for 60 days or more, remove the battery and store it separately.

Battery Replacement

1. Remove the Phillips head screws from the rear battery compartment cover.
2. Replace the 1.5V 'AA' battery and replace the cover.

Fuse Replacement

1. Remove the two (2) Phillips head screws from the rear cover.
2. Carefully lift off the rear cover.
3. Replace the 0.5A/250V fuse. Make sure the fuse is centered in the fuse holder.
4. Replace the rear cover.

Calibration and Repair Services

Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Care Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.

Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for **one year** from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.



Support line (781) 890-7440

Technical Support: Extension 200; E-mail: support@extech.com

Repair & Returns: Extension 210; E-mail: repair@extech.com

Product specifications subject to change without notice

For the latest version of this User Guide, Software updates, and other up-to-the-minute product information, visit our website: www.extech.com

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