AMPROBE INSTRUMENT®
DIVISION OF CORE INDUSTRIES INC., LYNBROOK, NEW YORK 11563

Printed in Taiwan



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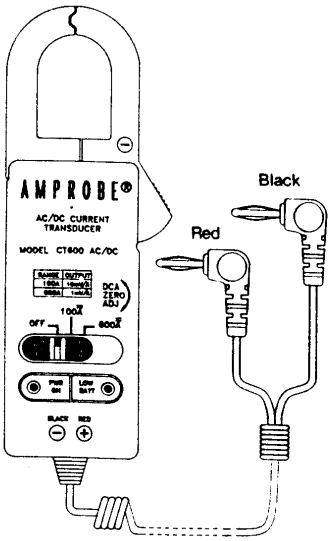
# OPERATING INSTRUCTIONS

for

## AMPROBE®
## AC/DC
## Current Transducer
## CT600 AC/DC




See "PRECAUTIONS FOR PERSONAL AND INSTRUMENT PROTECTION" on Page 2
See "LIMITED WARRANTY" on Page 2

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## LIMITED WARRANTY

Congratulations! You are now the owner of an AMPROBE® instrument. It has been quality crafted according to quality standards and contains quality components and workmanship. This instrument has been inspected for proper operation of all of its functions. It has been tested by qualified factory technicians according to the long-established standards of AMPROBE INSTRUMENT.

Your AMPROBE instrument has a limited warranty against defective materials and/or workmanship for one year from the date of purchase provided that, in the opinion of the factory, the instrument has not been tampered with or taken apart.

***Should your instrument fail due to defective materials, and/or workmanship during the one-year warranty period, return it along with a copy of your dated bill of sale which must identify instrument by model number and serial number.***

For your protection, please use the instrument as soon as possible. If damaged, or should the need arise to return your instrument, it must be securely wrapped (to prevent damage in transit) and sent prepaid via Air Parcel Post insured or UPS where available to:

Service Division
AMPROBE INSTRUMENT
630 Merrick Road (For U.P.S.) • P.O. Box 329 (For P.P.)
Lynbrook, NY 11563-0329

Outside the U.S.A. the local Amprobe representative will assist you. Above limited warranty covers repair and replacement of instrument only and no other obligation is stated or implied.

### PRECAUTIONS FOR PERSONAL AND INSTRUMENT PROTECTION

1) Read these instructions thoroughly and follow them carefully.
2) In many instances you will be working with dangerous levels of voltage and/or current; therefore, it is important that you avoid direct contact with any uninsulated, current-carrying surfaces. Appropriate insulating gloves and clothing should be worn.
3) Under no condition is voltage to be applied to this instrument.
4) This instrument is to be used in conjunction with a digital multimeter for readout purposes only.
5) Do not use this instrument on voltage higher than 600V.
6) Instrument's overload capacity is 800 amps.

**IMPORTANT: Failure to follow these instructions and/or the above precautions may result in personal injury and/or damage to the instrument and/or accessories.**



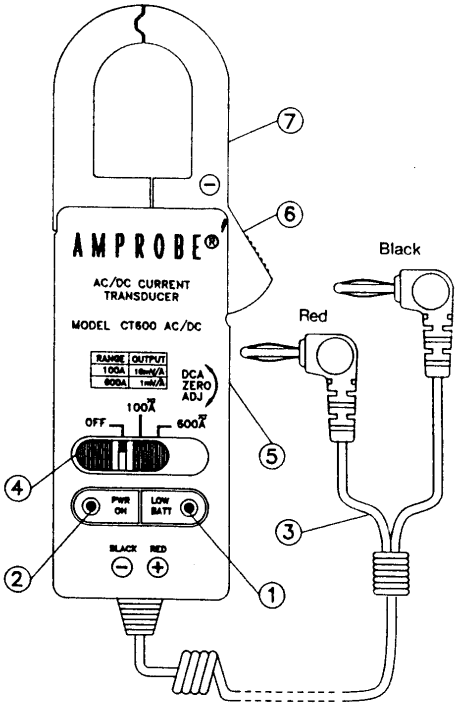


Fig. 1

1) Red LED - Low Battery Indicator
2) Green LED - Power On
3) Coil Cord with Output Banana Plugs
4) Function/Range Select Switch
5) DC Zero Adjust Knob
6) Trigger - Press here to open jaws
7) Transducer Jaws

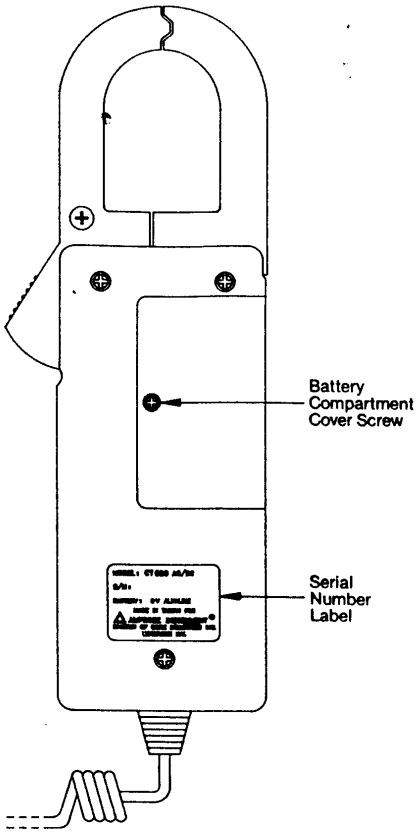


**Fig. 2**
**Back View**



## SPECIFICATIONS

**AC Current:** 0-100 Amps; 40-400 Hz
*Output Voltage:* 10mV/A
0-600A Amps; 40-400 Hz
*Output Voltage:* 1mV/A
*Accuracy:* ±2% of rdg ± 0.5A from 0-100* Amps
±2% of rdg ± 2A from 100-600 Amps

**DC Current:** 0-100 Amps
*Output Voltage:* 10mV/A
0-600 Amps
*Output Voltage:* 1mV/A
*Accuracy:* ±2% of rdg ± 0.5 A from 0-100* Amps
±2% of rdg ± 2A from 100-600 Amps

**Frequency Response:** AC 40-400 Hz
**Ranges:** 0-100 Amps; 0-600 Amps AC/DC
**Load Impedance:** (Multimeter Input Impedance) 5KΩ minimum
**Overload Protection:** 800 Amps AC/DC
**Positional Error:** ± 1%
**Low Battery Indicator:** Red LED ON
**Power On Indicator:** Green LED Flashing
**Operating Temperature and Humidity:** 0°C (32°F) to 50°C (122°F) 80% RH
**Storage Temperature/Humidity:** -20°C (-4°F) to 60°C (140°F) 80% RH
**Power Requirements:** 9 Volt Alkaline Battery supplied
**Battery Life:** Minimum of 60 hours
**Jaw Capacity:** 1.33" (34mm) dia or .785" (20mm) x 1.57" (40mm) Bus Bar
**Size:** 8½" (21.5cm) x 2⅞" (7.3cm) x 1 1/16" (2.7cm)
**Weight:** .88 lbs (400 gms)

* This *Accuracy* is on the 0-100 Amps range only.

## UNPACKING AND INSPECTION OF CONTENTS

Included with this Instruction Booklet should be the CT600 AC/DC and a Carrying Case.

## DESCRIPTION

Model CT600 AC/DC, when used in conjunction with a Digital Volt Meter (DVM), will measure AC and DC currents up to 600 Amps. It utilizes two Hall Effect Generators as part of its jaw construction which minimizes the non linearity of the entire range and accounts for small positional errors. The output of the Current Transducer (CT) is proportional to the current being measured and is outputted as either 1mV/A or 10mV/A depending on the range selected.

## CIRCUIT PROTECTION

***Caution:*** This instrument is not fuse protected. Do not apply voltage to the red and black banana plugs.

## LOW BATTERY INDICATION

Replace battery when red LED "Low Batt" turns on. (See fig. 1) Use a MN1604 9V alkaline battery.

## BATTERY INSTALLATION

Remove single screw holding battery compartment cover. Carefully snap new battery into connector. Slide battery compartment cover back into place and tighten screw. (See fig 2).

## HELPFUL HINTS FOR GETTING TOP PERFORMANCE FROM YOUR AC/DC CURRENT TRANSDUCER

1) When making a measurement, be sure to center the jaws of the transducer around the conductor.
2) Be sure the jaws are closed properly before taking any readings.
3) When measuring currents of widely varying values, start with the conductor in which you expect to find the lowest current, then next highest etc. To reduce the possibility of retained magnetism in the jaw, open and close the jaws a few times between measurements.
4) When measuring DC current be sure to zero adjust instrument before taking any readings. Connect output of transducer to DVM and turn zero adjust knob, located on side of instrument, until DVM reads zero.

## HOW TO MEASURE AC CURRENT

1) Set up the DVM to read AC millivolts.
2) Connect black and red banana plugs from the CT to the input of DVM. Be sure to observe polarity (Black is "–").
3) Turn on DVM and move slide switch on CT to desired range. DVM should now be reading all zeroes and green LED on CT should be flashing indicating the instrument is ready for use.
4) Clamp and center jaws of CT around conductor to be monitored.
5) Take readings on DVM using the output ratio of 10mV/A or 1mV/A depending on range selected. e.g., If the CT is on the 100 Amp range and the reading on the DVM is 850mV, then the current flowing through the conductor is 85 Amps AC.



## HOW TO MEASURE DC AMPS

1) Set up DVM to read DC millivolts.
2) Connect black and red banana plugs from CT to input of DVM. Be sure to observe polarity. (Black is "–").
3) Turn on DVM and move slide switch on CT to the desired range. Zero output of transducer by turning zero adjust knob located on side of instrument. (See fig. 1)
4) Clamp and center jaws of CT around conductor to be monitored.
5) Take readings on DVM using the output ratio of 10mV/A or 1mV/A depending on range selected. e.g., If the CT is on the 600 Amp range and the reading on the DVM is 250mV, then the current flowing through the conductor is 250 Amps DC. CT output must be zeroed using DVM before taking any reading. Make sure jaws are not clamped around the current carrying conductor when zeroing.

## SERVICE

Serial number is located on the back label of the instrument.

For factory service, package instrument and packing slip with sufficient cushioning material in a shipping carton; make certain your name and address also appear on box as well as packing slip; ship prepaid via U.P.S. (where available) or Air Parcel Post insured to:

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