

# DIGITAL CLAMP-ON TESTER

## MODEL MCL-800D

### INSTRUCTION MANUAL

Thank you very much for selecting our digital AC current clamp-on tester.

This model is complex instrument and employ a very reliable mechanical/electronic design.

Before you use your new instrument, read this Instruction Manual completely and familiarize yourself thoroughly with all functions. With proper use and care, your tester will give you years of satisfactory service.

#### 1. FEATURES

- 80mm  $\phi$  big window CT.
- DC mV analog data output for recorder.
- The least affection from external magnetic field.
- Filter function to cut the influence of high frequency.

#### 2. SPECIFICATION

Measuring method	Dual integration mode
Display	3.5 digit LCD
Range	AC 200mA/2A/20A/200A/1000A
Ranging	5 ranges manual

Accuracy: 23°C  $\pm$  5°C, less than 80% RH (50/60Hz)

Range	Mini. Resolution	Accuracy
AC 200mA	0.1mA	$\pm 2.0\%rdg \pm 5dgt$
AC 2A	1mA	
AC 20A	10mA	
AC 200A	0.1A	
AC 1000A	1A	

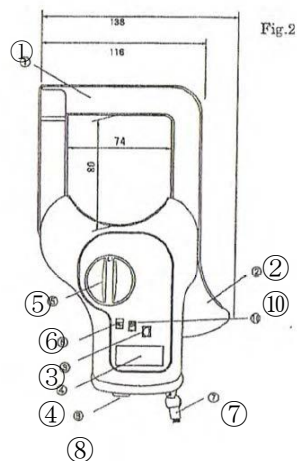
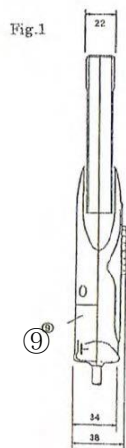
Jaw opening capability	80mm $\phi$
Over range indication	Blanking of all digits except MSD1
Maximum indication	1999 count
Low battery indication	"B" mark on LCD readout

Data hold indication	"D·H" mark on LCD readout
Data output	DC 100mV to each range full scale (DC50mV/1000A)
Sampling time	2 times/sec.
Limitation of circuit voltage	Less than AC 600V
Withstanding voltage	AC2000V/1 minute between CT core and outer case
Operating temperature	0°C to +40°C, < 80%RH (non-condensing)
Storage temperature	-10°C to +60°C, < 70% RH (non-condensing)
Power supply	UM-4 (1.5V)x2
Power consumption	Approx. 3mW
Battery life	Approx. 350 hours (by alkaline batteries)
Size	138(W)x225(H)x37(D)mm
Weight	Approx. 500g
Accessories	Batteries (UM-4).....2 Instruction manual.....1 Carrying case.....1
Optional accessory	Cable for recorder output (MR-002)

### 3. CAUTION

- Before operating this instrument, familiarize yourself with all instructions outlined in this manual.
- Always check to make sure that the function switch is set to the proper position.
- When making measurements, use CAUTION as dangerous voltages may be present in normally safe areas.
- To avoid electrical shock, use CAUTION when working above 60V DC or 25V AC rms. Such voltages pose a shock hazard.
- Never make measurements with the battery cover OFF.
- Never fail to keep the maximum tolerable input.
- Never operate this instrument if it becomes wet, damp or has any liquid condensation build-up on any part of the instrument.
- Never make measurements for uninsulated conductors or bus bars.

### 4. DIMENSIONS AND PANEL FUNCTION



- ① Current transducer (Jaw)
- ② Jaw opening lever
- ③ Data hold switch
- ④ LCD display
- ⑤ Range selector switch
- ⑥ Power switch
- ⑦ Wrist strap
- ⑧ Output terminal for recorder
- ⑨ Battery cover
- ⑩ Filter switch

## 5. METHOD OF MEASUREMENT

### 5-1 Measurement of Leakage Current

#### 5-1-1 Leakage current measurement for the grounded conductor

- 1) Set the power switch to "ON" position.
- 2) Set the range selector switch to arrange appropriate to the current to be measured.
- 3) Clamp the conductor of the circuit under test with the current transducer.
- 4) In a dark place or where it is difficult to read the readings, use data hold switch.

#### 5-1-2 Leakage current measurement for single phase or three phase electric circuit

- 1) Set the power switch to "ON" position.
- 2) Set the range selector switch to arrange appropriate to the current to be measured.
- 3) To measure leakage current in single phase electric circuit, clamp the two conductors together. Clamp the three or four conductors together in case of three phase electric circuit.
- 4) In a dark place or where it is difficult to read the display, use data hold switch.
- 5) To cut off the influence of high frequency, use filter switch.
- 6) After measurement, set the power switch to "OFF".

### 5-2 Measurement of Line Current

- 1) Set the power switch to "ON" position.
- 2) Set the range selector switch to arrange appropriate to the current to be measured.
- 3) Clamp the conductor of the circuit under test.  
\* Note: Clamp around only one conductor in the circuit to be measured.
- 4) Read the displayed value.
- 5) In a dark place or where it is difficult to read the readings, use data hold switch.
- 6) After measurement, set the power switch to "OFF".

#### CAUTION:

This tester is designed for low voltage applications.  
To avoid electrical shock or damage, the measurement is limited to the circuit under 600V AC.

- Never make measurement for uninsulated conductors or bus bars.

## 6. REPLACEMENT OF BATTERIES

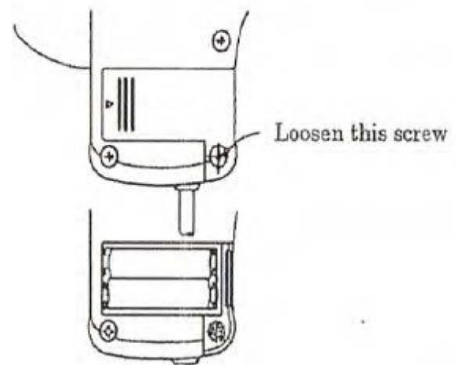
When the battery becomes exhausted or drops below the operating voltage, the "B" mark is displayed. Turn the power switch to "OFF", prior to installing batteries.

To replace the batteries, loosen the screw and remove the battery cover located on the unit back.

Insert two batteries (UM-4 or type AAA) with new ones, observing polarity.

Use high quality batteries which are guaranteed against leakage.

If the instrument is to be left unused for a long period, remove the batteries to prevent damage from leakage.



## REPAIR SERVICE

When requesting for repair service, please bring the instrument directly to the dealer where you bought.

When mailing the instrument, always pack it in its original or equivalent packing materials to avoid any damage during the transportation and also put together with documents showing your name, address, phone number and defect point.

## WARRANTY

This instrument is sent out from our factory after the sufficient internal inspections but if you find any defect due to the fault in our workmanship or the original parts, please contact the dealer where you bought the instrument.

The warranty period is 12 months from the date of purchase and the instrument shall be repaired at free of charge, provided that we judge the cause of defect is obviously resulted from our responsibility.

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