

# DRAPER<sup>®</sup>

## INSTRUCTIONS FOR Digital Clamp Meter

Stock No.79000 Part No.DMM8B

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



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### GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product. Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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# DECLARATION OF CONFORMITY

We :  
 Draper Tools Ltd.,  
 Hursley Road,  
 Chandler's Ford,  
 Eastleigh, Hampshire.  
 SO53 1YF.  
 England.

Declare under our sole responsibility that the product:

Stock No:- **79000.**  
 Part No:- **DMM8B.**  
 Description:- **Digital Clamp Meter.**

To which this declaration relates is in conformity with the following directive(s) 73/23/EEC, 89/336/EEC.

With reference to: EN61010-1:2001, EN61010-3-031:1994, EN61010-2-032:1995, EN61326:1997, EN55022, EN61000-4-2, EN61000-4-3.

J.N. Draper  
 Managing Director

11/08/2004



# SPECIFICATION

Stock No. .... 79000  
 Part No ..... DMM8B  
 Battery Type .....2x1.5V AAA  
 Dimensions.....200(H) x 50(W) x 35(D) mm  
 Weight.....200g

- **DC VOLTAGE (autoranging):** Input impedance 7.8M ,  
 Overload protection 600V DC or AC RMS.

Range	Accuracy
200mV	±0.5% rdg ± 5 dgts
2V	
20V	±1.2% rdg ± 3 dgts
200V	
600V	±1.5% rdg ± 3 dgts

- **AC VOLTAGE (autoranging):** Input impedance 7.8M ,  
 Input protection 600V DC or AC RMS, Frequency range: 50-400Hz.

Range	Accuracy
200mV	±1.5% rdg ± 30 dgts
2V	
20V	±1.5% rdg ± 3 dgts
200V	
600V	±2.0% rdg ± 4 dgts

- **AC CURRENT:** Maximum Input: 400A, frequency range: 50/60Hz.

Range	Accuracy
2A	±2.5% rdg ± 6 dgts
20A	±2.5% rdg ± 4 dgts
200A	
400A	±3.0% rdg ± 4 dgts



# SPECIFICATION

- **RESISTANCE (autoranging):** Input protection: 250V DC or AC RMS.

Range	Accuracy
2	$\pm 1.0\%$ rdg $\pm 4$ dgts
2k	
20k	$\pm 1.5\%$ rdg $\pm 2$ dgts
200k	
2M	$\pm 2.0\%$ rdg $\pm 3$ dgts
20M	$\pm 3.0\%$ rdg $\pm 5$ dgts

- **DIODE CHECK:** Test current: 0.3mA typical, Overload protection: 250V DC or 250V AC RMS.

Open Circuit Voltage	Accuracy
1.5V DC Typical	~

- **AUDIBLE CONTINUITY:**

Audible Threshold	Test Current
<100	<1mA

reading - accuracy of the measurement circuit.

digits - accuracy of the analog to digital conversion.

- **WARNING: Ensure the test leads are fully engaged prior to carrying out any measurements to avoid electric shock.**

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date purchase except where the tools are hired out when the guarantee period is ninety days from the date of purchase.

Should the tool develop a fault, please return the complete tool to your nearest authorised warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF, England. Telephone: (023) 8026 6355.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent. This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12 month period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights. Draper Tools Limited.

**SAFETY INFORMATION:**

The following safety information must be observed to insure maximum personal safety during the operation of this meter.

- Do not use the meter if the meter or test leads look damaged, or if you suspect that the meter is not operating correctly.
- Never ground yourself when taking electrical measurements. Do not touch exposed metal pipes, outlets, fixtures, etc. which might be at ground potential. Keep your body isolated from ground by using dry clothing, rubber shoes, rubber mats, or any approved insulating material.
- Turn off power to the circuit under test before cutting, unsoldering, or breaking the circuit. Small amounts of current can be dangerous.
- Use caution when working above 60Volts DC or 30Volts AC, as these voltages pose a shock hazard.
- When using probes, keep your fingers behind the finger guards on the probes.
- Measuring voltage which exceeds the limits of the multimeter may damage the meter and expose the operator to a shock hazard. Always recognize the meter voltage as stated on the front of the meter.
- Never apply voltage or current to the meter that exceeds the specified maximum.










- ① Current clamp.
- ② Clamp trigger.
- ③ Function switch.
- ④ Liquid crystal display.
- ⑤ Max hold button.
- ⑥ Data hold button.
- ⑦ Mode button. To select Resistance, Diode Check, or Audible Continuity Check.
- ⑧ Range button.
- ⑨ Backlight button.
- ⑩ COM jack socket. Plug in the black (negative) test lead.
- ⑪ V Ω (Voltage, Resistance) jack socket. Plug in the red (positive) test lead.

- **UNPACKING:** After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the clamp meter and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

## - OTHER METER MARKINGS

	Diode check.
	Indicates that the meter battery voltage has dropped excessively.
10A~	Units of measuring current (AMPS).
V $\overline{\text{---}}$ V~	Units of measuring voltage (VOLTS).
	Caution.
	Caution, risk of electric shock.
	Audible continuity range.

**WARNING:** Each time you use this instrument, inspect the test leads, connectors and probes for damage, e.g. cracks or breaks in the insulation. Any defective leads should be replaced. If the voltage to be measured is not known and the meter is not autoranging, set the selector switch to the highest range and reduce until a satisfactory reading is obtained. Always ensure that the probe plugs are inserted fully into the multimeter.

**NOTICES:** Read and understand all warning and precaution statements listed in the safety section of this operation manual prior to using this meter. Set the function select switch to the OFF position when the meter is not in use.

- **DATA HOLD BUTTON:**

To freeze the LCD meter reading, press the data hold button. The data hold button is located on the left side of the meter. While data hold is active, the DH display icon appears on the LCD. Press the data hold button again to return to normal operation.

- **MAX HOLD BUTTON:**

To hold the highest reading on the LCD, press the MAX hold button. The MAX hold button is located on the left side of the meter. The meter reading will not change as readings change, rather it will only display the highest reading encountered since the MAX hold button was pressed. Press the MAX hold button again to return to normal operation.

- **MANUAL RANGING:**

The meter turns on in the autoranging mode. Press the Range button to go to manual ranging. Each press of the button will step to the next range as indicated by the units and decimal point location. Press and hold the Range button for two seconds to return to autoranging. Manual ranging does not function in the AC Current, Diode and Continuity check functions.

- **BACKLIGHT BUTTON:**

The backlight function illuminates the display and is used when the ambient light is too low to permit viewing of the displayed readings. Press the backlight button for one second to turn the backlight on and press the button a second time to turn the backlight off.



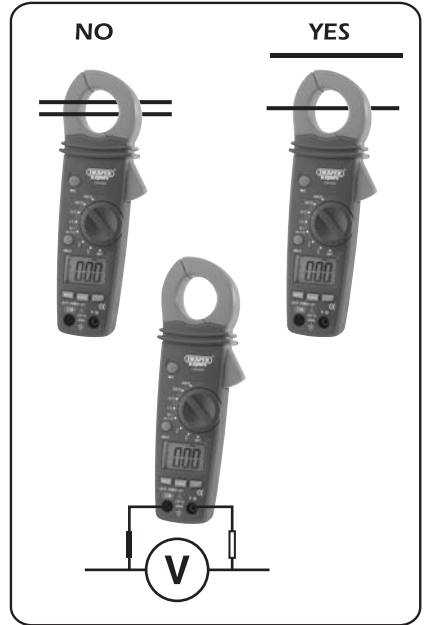
## - AC Current Measurements:

**WARNING:** Ensure that the test leads are disconnected from the meter before making current clamp measurements.

1. Set the function switch to the 400A, 200A, 20A or 2A range. If the range of the measured is not known, select the higher range first then move to the lower range if necessary.
2. Press the trigger to open jaw. Fully enclose one conductor to be measured.
3. The clamp meter LCD will display the reading.

## - 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 function switch to the V position.
3. Select AC or DC with the MODE button.
4. Connect the test leads in parallel to the circuit under test.
5. Read the voltage measurement on the LCD display.



## - Resistance and Continuity Measurements:

1. Insert the black test lead into the negative (COM) terminal and the red test lead into the positive terminal.
2. Set the function switch to the  $\rightarrow \text{+} \text{|||}$  position
3. Use the multifunction MODE button to select resistance.
4. Touch the test probe tips across the circuit or component under test. It is best to disconnect one side of the device under test so the rest of the circuit will not interfere with the resistance reading.
5. For resistance tests, read the resistance on the LCD display.
6. For continuity tests, if the resistance is  $<100$ , a tone will sound.

## - Diode Measurements:

1. Insert the black test lead banana plug into the negative (COM) jack and the red test lead banana plug into the positive diode jack.
2. Turn the rotary switch to the  $\rightarrow \text{+} \text{|||}$  position.
3. Press the MODE button until " $\rightarrow \text{+}$ " appears in the display.
4. Touch the test probes to the diode under test. Forward voltage will indicate 0.4V to 0.7V. Reverse voltage will indicate "OL". Shorted devices will indicate near 0mV and an open device will indicate "OL" in both polarities.

## MAINTENANCE

The fuse rarely needs replacing, and almost always a blown fuse is the result of an operator error.

- **WARNING: If the resistance to be measured is part of a circuit, turn off and disconnect the power and discharge all capacitors before measurement.**

If the meter battery is in need of replacement  will appear on the display.

## BATTERY INSTALLATION

- **WARNING: To avoid electric shock, disconnect the test leads from any source of voltage before opening the casing.**

1. Disconnect the test leads from the meter.
2. Open the casing by loosening the screws at the rear.
3. Open the casing gently, taking care not to damage the meter.
4. Insert the battery into the holder, observing the correct polarity.
5. Close and resecure the casing.

- **WARNING: To avoid electric shock, do not operate the meter until the casing is in place and fastened securely.**

- **Note:** If your meter does not function correctly, check the fuse and battery to ensure they are properly installed.

## FUSE REPLACEMENT

**WARNING: To avoid electric shock, disconnect the test leads from any source of voltage before opening the casing.**

1. Disconnect the test leads from the meter.
2. Open the casing by loosening the screws at the rear.
3. Open the casing gently, taking care not to damage the meter.
4. Install the new fuse, ensuring the correct type and that the value matches the blown fuse.
5. Close and resecure the casing.

**WARNING: To avoid electric shock, do not operate the meter until the casing is in place and fastened securely.**



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