DRAPER®

THE TOOL COMPANY

DIGITAL A.C./D.C. CLAMP METER

■ STOCK No.53209 ■ PART No.DMM8

04/2003

● INSTRUCTIONS ●

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

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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:

Part Number:- DMM8. **Stock Number:-** 53209

Description:- Digital Clamp Meter

To which this declaration relates is in conformity with the following directive(s): 73/23/EEC, 93/68EEC & 89/366/EEC

With reference to EN61010-1, EN61010-2, EN61010-2-32, EN50081-1 & EN50082-1.

J.N. DRAPER
Managing Director

06/08/97

INTRODUCTION

This lightweight digital clamp meter is ideal for general electrical and automotive use.

FEATURES

- 8 position rotary function and range selector.
- Recessed input terminals for added safety.
- Measures A.C./D.C. voltage, A.C./D.C. amps resistance & temperature.
- Audible continuity test.
- One-touch zero adjustment.
- 23mm diameter jaw.
- Large L.C.D. readout.
- Data hold function.

SPECIFICATION at 23°C ± 3°C

D.C. Current:

Range	Resolution	Accuracy
20A	10mA	±3.5% ± 3 dgts
200A	100mA	± 3.5% ± 3 dgts

A.C. Current:

Range	Resolution	Accuracy			
		50~60Hz	40~100Hz	100~400Hz	400~1000Hz
20A	10mA	± 3% ± 4 dgts	± 3% ± 7 dgts	± 3% ± 10 dgts	± 3% ± 30 dgts
200A	100mA	± 3% ± 4 dgts	± 3% ± 7 dgts	± 3% ± 10 dgts	± 3% ± 25 dgts

D.C. Voltage: (Input Impedance:10M):

Range	Resolution	Accuracy
0~600V	1V	± 1% ± 2 dgts

A.C. Voltage (Input Impedance:10M):

Range	Resolution	Accuracy		
		50~60Hz	40~400Hz	400~1000Hz
0~600V	1V	± 1.5% ± 3 dgts	± 2% ± 10 dgts	± 2% ± 25 dgts

A.C. / D.C. Voltage

Impedance	Accuracy
10M	± 3.5% ± 6 dgts

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SPECIFICATION at 23°C ± 3°C Cont'd

Temperature: (K type Thermoelectric couple)

Range	Resolution	Accuracy
-20°C ~ 1370°C	1°C	± 3% ± 3 dgts (‹150°C)
-20°C ~ 1370°C	1°C	± 3% (›150°C)

Resistance:

Range	Resolution	Accuracy	Audible Tone
2000	1	± 1% ± 2 dgts	<25

WARNING:
To avoid electric shock, remove test leads before opening cover.

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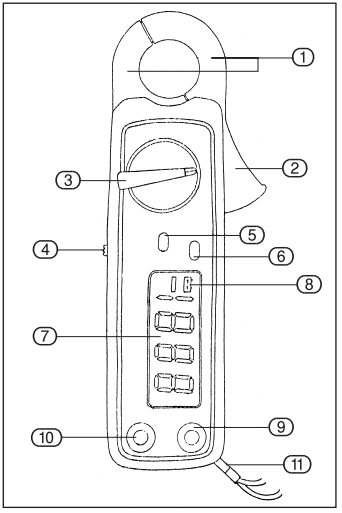
KNOW YOUR MULTIMETER



1. **Transformer Clamp (jaw) -** This picks up the current signal to measure A.C./D.C. current. The conductor must be enclosed by the jaw.
2. **Transformer Clamp (jaw) Release Knob -** This is used to open the spring-loaded jaw.
3. **Rotary Function Selector -** Used to select the desired function/range.
4. **On/Off Switch -** Turns the meter on/off.
5. **Data Hold Button -** When this button is depressed the reading on the meter will be held on the L.C.D. display until depressed again.
6. **Zero/Reset Button -** When this button is depressed the reading on the L.C.D. display will be reset to zero. This function is mainly used to remove an offset value caused by the residual magnetism which remains in the core when measuring D.C. current.

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KNOW YOUR MULTIMETER Cont'd

⑦ **L.C.D. Readout -**
Large liquid crystal display (L.C.D.) with a maximum indication of 1999.

⑧ **Low Battery Symbol -**
Indicates that the battery power is low and should be replaced.

⑨ **V , , °C Input Terminal -**
This is used when measuring voltage, ohms/continuity or temperature using the test probes supplied.

⑩ **Com Input Terminal -**
This is used with the common reference input.

⑪ **Hand Strap**

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METER SYMBOLS & MARKINGS

	Audible continuity check has been selected.
	Resistance range has been selected.
°C	Temperature range has been selected.
~V	A.C. voltage range has been selected.
⎓V	D.C. Voltage range has been selected.
A~	A.C. current measurement has been selected.
A⎓	D.C. current measurement has been selected.
	Caution: risk of electric shock.

OPERATION

A.C./D.C. CURRENT MEASUREMENTS

WARNINGS:-

1. When measuring A.C. or D.C. current, ensure test probes are **NOT** connected to the meter! Failure to disconnect the probes may result in electric shock.
2. Before you use the instrument, inspect the test leads, connectors and probes for damage e.g. cracks or breaks in the insulation. Replace any defective leads before use.

D.C. CURRENT:

(a) Set the rotary selector switch to the desired D.C. current range, (either 20A⎓ or 200A⎓).

(b) Depress the zero/reset button and hold for approximately two seconds.
NOTE: If the reading is still not at zero, release the button and depress it again.

(c) Open the jaw and fully enclose the conductor which is to be measured, ensuring there is no gap between the jaws when closed.

(d) Read the value on the L.C.D. display.

(e) Ensure that the offset value caused by residual magnetism is still removed. If the new offset value is produced then remove it again using the zero/reset button. Make a new measurement and repeat (c) and (d) above.
NOTE: If the new current to be measured exceeds the current previously measured, or the direction of current changes, then a new offset value will be produced).

A.C. CURRENT:

(a) Set the rotary selector switch to the desired A.C. current range (either 20A~ or 200A~).

(b) Open the jaw and fully enclose the conductor which is to be measured ensuring there is no gap between the jaws when closed.

(c) Read the measured value from the L.C.D. display.

A.C./D.C. VOLTAGE MEASUREMENTS

Warning maximum input value of A.C. or D.C. voltage is 600V. Never attempt to take any voltage measurements which exceed this limit. Exceeding the limit could lead to electric shock and damage to the meter.

D.C. VOLTAGE:

(a) Set the rotary selector switch to the D.C. voltage measurement position (⎓V).

(b) Insert the test leads into the input sockets (red lead to the red 'V, , °C' socket and the black lead to the black 'Com' socket).

(c) Connect the test leads to the circuit to be measured. The voltage value will now appear on the L.C.D. readout.

A.C. VOLTAGE MEASUREMENTS

(a) Set the rotary selector switch to the A.C. voltage measurement position (~V).

(b) Insert the test leads into the input sockets (red lead to the red 'V, , °C' socket and the black lead to the black 'Com' socket).

(c) Connect the test leads to the circuit to be measured. The voltage value will now appear on the L.C.D. readout.

RESISTANCE AND CONTINUITY MEASUREMENT

WARNING:

Before taking any in-circuit resistance measurements, disconnect the power to the circuit and discharge all capacitors. Failure to do this will damage the meter.

(a) Set the rotary selector switch to the ohms/audible continuity range (, •)).

(b) Insert the test leads into the input sockets (red lead to the red 'V, , °C' socket and the black lead to the black 'Com' socket).

(c) Connect the test probes to the two ends of the resistor or circuit to be measured. Read the measured value from the L.C.D. display.

NOTE: If the resistance value is less than 25 then the meter will beep to indicate this.

TEMPERATURE MEASUREMENT:

(a) Set the rotary selector switch to the temperature (°C) position.

(b) Connect the 'K' type thermoelectric coupling to the red 'V, , °C' and black 'Com' input sockets.

(c) Read the measured value from the L.C.D. display.

MAINTENANCE

If the meter battery needs replacing a  symbol will appear on the display. To install a new battery, remove the cover on the rear of the meter & connect the battery to the terminals, observing the correct polarity.

Inspect the test leads on connectors and probes for damage e.g. cracks or breaks in the insulation. Replace any defective leads before use.

SPARE PARTS

Stock No.53551. Part No.YDMM8.

Description: Spare Test Probe Set.

Stock No.61837. Part No.D6LR61/HD.

Description: 9V. Heavy Duty Alkaline Battery.

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