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Original Instructions
Version 3
August 2025

POCKET DIGITAL
MULTIMETER

68476



1. Product Introduction

1.1 Intended Use

This compact multimeter is designed to measure AC/DC voltage, DC current, resistance, diode and test transistors. Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts

no responsibility for improper use of this product.
Read this manual in full before attempting to assemble, operate or maintain the product, and retain it for later use.

1.2 Specification

Stock No.	68476
Part No.	DMM8
Multimeter rating:	CAT I, 500V
Dimensions:	L 125 X W 70 x H 24mm
Batteries Required:	1 X 9V PP3/6F22 (not supplied)
Fuse Protection:	F1 F5A/500V & F2 F500mA/500V
Overload Protection:	
200mV range	220V AC rms
All other ranges	500V DC/AC rms
Weight (battery fitted):	110g
Open Circuit Voltage:	0.25V
Operating Temperature:	10°C to 40°C
Storage Temperature:	-10°C to 50°C
Humidity:	<75% R.H

Range Selection	Range	Resolution	Accuracy
DC Voltage Input impedance: 10MΩ	200mV	100μV	+/- 0.5% reading +/-3 digits
	2000mV	1mV	
	20V	10mV	+/- 1% reading +/-5 digits
	200V	100mV	
	500V	1V	+/- 1.2% reading +/-5 digits
AC Voltage Frequency range 45 – 450Hz	200V	100mV	
	500V	1V	+/- 1.2% reading +/-10 digits
DC Current	200μA	100nA	
	2000 μA	1μA	+/- 1.8% reading +/-2 digits
	20mA	10μA	
	200mA	100μA	+/- 2% reading +/-2 digits
	5A	10mA	+/- 2% reading +/-10 digits
Resistance	200Ω	0.1Ω	+/- 1% reading +/-10 digits
	2000Ω	1Ω	
	20kΩ	10Ω	+/- 1% reading +/-2 digits
	200kΩ	100Ω	
	2000kΩ	1kΩ	
Transistor hFE PNP/NPN	Test Current/Voltage 10 μA/VCE 2.8V		
Diode	Approx. forward voltage drop of the diode displayed.		

Important: Read all the Health and Safety instructions before attempting to use this product. Failure to follow these instructions may result in serious injury or death.



WARNING! Contact with live circuits can result in severe electrical shock.

- **Take care not to touch the exposed contacts as they may give a serious electric shock.**
- **Use caution when working with voltage above 60V DC, 30V AC RMS or 42V peak.**
- **DO NOT measure voltage above 500V DC or AC (RMS).**
- **DO NOT apply voltages to the probe while measuring current or diodes.**
- **ONLY** trained and competent personnel may operate this device.
- Use this product **ONLY** as instructed in this manual.
- **ALWAYS** connect the black test lead before connecting the red test lead and disconnect the red test lead first.
- Use **ONLY** accessories and spare parts supplied by Draper Tools.
 - If the fuses must be replaced, use identical items with the same specification.
 - If the battery must be replaced, use one with the same specification.
- Observe all standard precautions and good practice when working with live electrical currents.
- Inspect the product for damage before every use, particularly the contact tips.
 - **DO NOT** use this product if the device, case or probe leads are damaged in any way or if there is evidence of battery leakage. Contact Draper Tools for replacement options if the leads become damaged.
 - If battery acid comes into contact with your skin, wash it off immediately with plenty of clean water.
 - If battery acid comes into contact with your eyes, flush them with plenty of clean water and seek immediate medical attention.
- Ensure that the device is clean, dry and free from grease before use.
- **DO NOT** use this product if it exhibits abnormal behaviour and have it checked by a qualified and authorised technician before next use.
- **DO NOT** exceed the maximum rated capacity per function for this device as it may expose you to a shock hazard.
- Ensure that the probe contacts are disconnected from the load or test circuit before moving the function dial.
- Assess any specific additional risks to the operator before each use.
- **DO NOT** expose this product to excessive ambient temperature, high humidity, flammable substances or environments that produce a strong magnetic field.
- **DO NOT** use this product around explosive gases, vapours or dust.
- **DO NOT** immerse this device in water or expose it to wet conditions.
- **ALWAYS** wear protective insulated gloves while using this product.
- Keep your fingers behind the guards on the test probes during use.
- **ALWAYS** turn the function dial to the '**OFF**' position before opening the back panel to replace the battery or fuses.
- **DO NOT** operate this device with the rear housing open or missing and **DO NOT** use it if the rear housing cannot be closed properly.
- **DO NOT** abuse, mutilate or burn the battery.
- Remove the batteries when the product is stored for extended periods.
- **DO NOT** attempt to repair this device; it contains no user-serviceable parts.
- Keep this product out of reach of children.



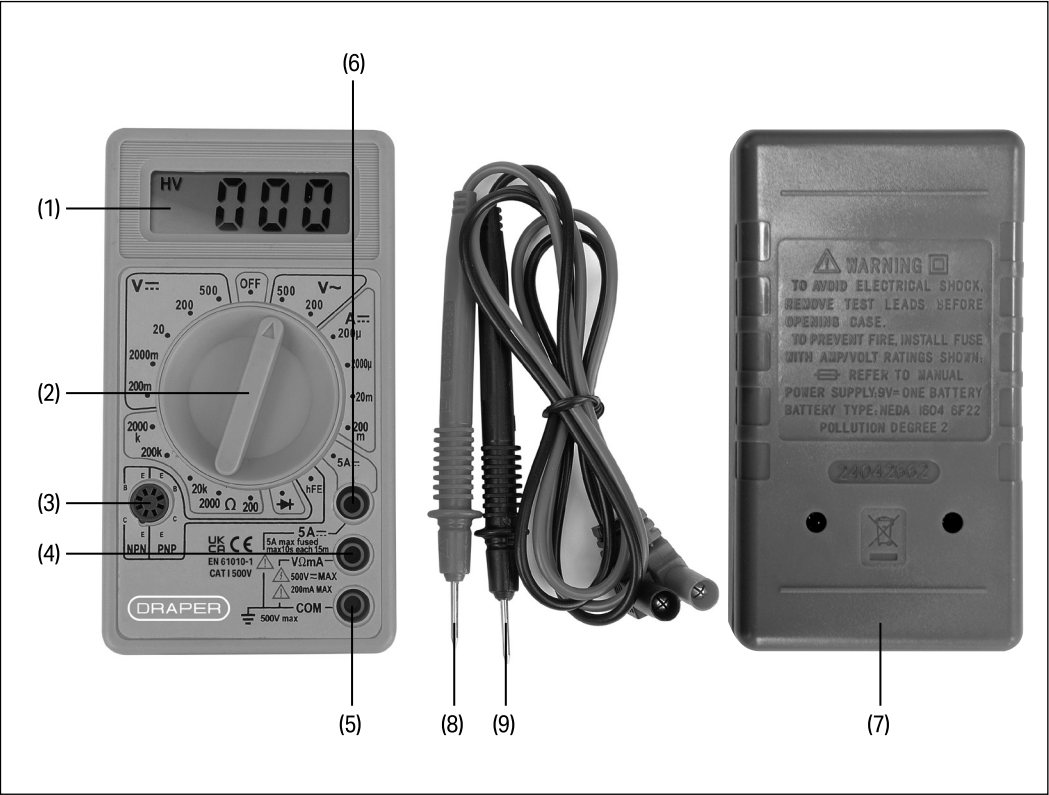
WARNING! ALWAYS ensure that the operator is not in contact with the ground while taking measurements, using insulating materials to prevent the current from earthing.

3. Identification and Unpacking

3.1 Product Overview

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment. If any part is damaged or

missing, do not attempt to use the product. Please contact the Draper Helpline; contact details can be found at the back of this manual.



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|-----|---|-----|--------------------------|
| (1) | Display screen | (6) | '5A' terminal |
| (2) | Function selector dial | (7) | Battery compartment |
| (3) | Transistor test socket | (8) | Red positive (+) probe |
| (4) | V/Ω/mA (Voltage/resistance/ampere) terminal | (9) | Black negative (-) probe |
| (5) | 'COM' terminal | | |

Please visit drapertools.com for our full range of accessories and consumables.

Important: Before operating this product, read and understand all the safety instructions listed in this manual.

4.1 Installing/Replacing the Battery - Fig. 1

Important: Use ONLY 9V PP3 batteries.

 **WARNING!** Remove the test leads from the circuit under test and turn the function dial to the 'OFF' before opening the back cover.

- 1. Unscrew and lift the back cover off.
- 2. Fit the battery (A) – ensuring polarity connections are correct (follow indicators on battery compartment).
- 3. Refit and screw the back cover on and tighten securely.

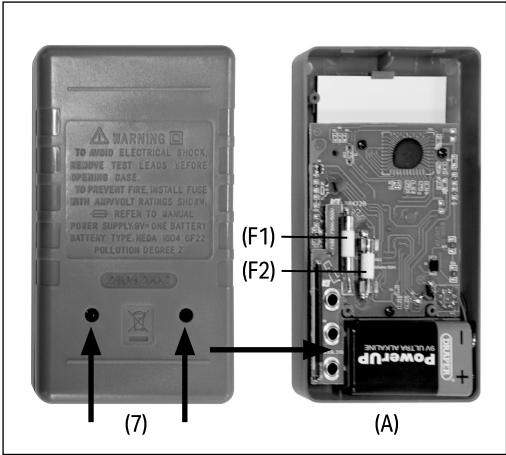


Fig. 1

5. Measurements

- For each measurement type, connect the negative (-) probe black (9) to the common earth probe terminal (5) and the positive (+) red probe (8) to the 'V/ Ω /mA' terminal (4).
- If a negative value is shown on the display, check the polarity of the probes at the component contacts and the device terminals.
- Turn the function selector dial (2) to select the required measurement mode. Always return the dial to the 'OFF' position once measuring is complete.

Mode	Dial Position	Action
DC Voltage Mode		1. Turn the function selector dial (2) to the 'DC voltage' position. 2. Connect the test leads to the device or circuit to measure. 3. Turn on the power to the device or circuit to measure and the value will be displayed on the screen (1). • If the voltage to measure if unknown set to the highest range and reduce if required.
AC Voltage Mode		1. Turn the function selector dial (2) to the 'AC voltage' position. 2. Connect the test leads to the device or circuit to measure. 3. Turn on the power to the device or circuit to measure and the value will be displayed on the screen (1). • If the voltage to measure if unknown set to the highest range and reduce if required.

5. Measurements

Mode	Dial Position	Action
DC Current Mode	A 	1. Connect the positive (+) red probe (8) to the 'V/mA' terminal (4) for measurements between 200mA and 5A and to the 5A terminal (6) for 5A. 2. Turn the function selector dial (2) to the 'current' position. 3. Open the circuit to be measured and connect the test leads in series with the load to be measured. • Note: 5A function is designed for intermittent use only. Maximum contact time is 10 seconds within a 15 minute period.
Diode Mode		1. Turn the function selector dial (2) to the 'diode' position. 2. Connect the red test probe to the anode and the black test probe to the cathode of the diode. 3. The approximate forward voltage drop in mV will be displayed on the screen (1). If the connection is reversed '1' will be displayed.
Resistance Mode		• If the resistance to be tested is part of a circuit, switch the circuit off, disconnect the power and allow all capacitors to discharge before measurement. 1. Turn the function selector dial (2) to the 'resistance' position. 2. Connect the test leads to the circuit being measured.
Transistor Test Mode	hFE	1. Turn the function selector dial (2) to the 'hFE' position. 2. Determine whether the transistor is PNP or NPN type. 3. Then Insert the leads into the correct corresponding test holes in the 'PNP/NPN' socket (3).

6. Warranty

Warranty is 12 months from date of purchase. Visit drapertools.com/warranty for more information.

Important: Disconnect the probes from the terminals and any other source of voltage before performing any maintenance on this product. **DO NOT** attempt to repair or service the meter unless qualified to do so.

7.1 Maintenance and Storage

- Keep the product clean and free from dust, debris and grease.
- Use a dry cloth **ONLY** to clean the housing of this device.

 **CAUTION! DO NOT use abrasives, solvents or other aggressive chemicals as these may damage plastic or insulated parts.**

- If the low battery indicator  is shown on the display, replace the battery as soon as possible; see **5.1 Installing/Replacing the Battery**.
- If the fuses (F1) or (F2) must be replaced, follow section **5.1 battery installation**, remove the fuse from its holder and install an equivalent fuse its place.

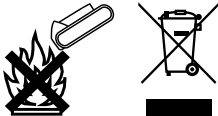
Important: This product requires Fuse 1 F5A/500V & Fuse 2 F500mA/500V.

- Remove the batteries when storing the device for extended periods.

- If the test leads need replacing, the replacement leads must be rated at least 600V/5A.
- Store the device in a cool, clean and dry environment, out of direct sunlight and out of reach of children.

7.2 Disposal

- At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.
- **DO NOT** dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.
- **DO NOT** burn or mutilate batteries; this may release toxic or corrosive substances.
- Dispose of batteries separately and in accordance with local regulations.



8. Explanation of Symbols



Read the instruction manual



Warning!



Warning! risk of shock



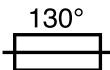
Do not incinerate or throw onto fire



Class II construction
(Double insulated)



Earthed



Fuse protective device



WEEE –
Waste Electrical & Electronic Equipment
Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish



European conformity



UK Conformity Assessed

Contact Details

Draper Tools

Draper Tools Limited
Hursley Road
Chandler's Ford
Eastleigh
Hampshire
SO53 1YF
UK

Website: drapertools.com

Email: sales@drapertools.com

Product Helpline: +44 (0) 23 8049 4344

Telephone Sales Desk: +44 (0) 23 8049 4333

General Enquiries: +44 (0) 23 8026 6355

Draper Tools Europe B.V.

Oude Graaf 8
6002 NL
Weert
Netherlands

Please contact the Draper Tools Product Helpline for repair and servicing enquiries.