

**1-800-547-5740 • Fax: (503) 643-6322**  
**www.ueitest.com • email: info@ueitest.com**

## Introduction

The DCM3 Digital Capacitance Meter offers solid value in an industrial quality meter. The wide range of inputs allows testing from the smallest electronic components to large run/start capacitors. The rugged design with protective boot and auto power off function keep your meter working.

### Features include

- 0.1% to 20 mF (20,000  $\mu$ F)
- Zero adjustment ( $\pm$ 20 pF for compensation of the measuring leads)
- Fuse protected input

## Safety Notes

Before using this meter, read all safety information carefully. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.

## Operating Instructions



### WARNING!

To avoid electrical hazards, discharge the capacitor before measuring.

1. For capacitance measurement less than 200nF, it should make "0-ADJ" for subtract the stray capacitance.
2. Set the range switch to the desired range.
3. Never apply an external voltage to the input terminals. Damage to the meter may result.
4. Observe polarity when measuring polarized capacitors.
5. Insert the capacitor leads into the receptacle socket or directly connect the test clip to the capacitor leads as required.
6. Read the capacitance direct from the display

### Battery Replacement

Power is supplied by a 9 volt transistor battery. (NEDA 1604, IEC6F22). The "b" appears on the LCD display when replacement is needed. To replace the battery, remove the two screws from the back of the meter and lift off the front case. Remove the battery from battery contacts.

### Fuse Replacement

If no current measurements are possible, check for a blown overload protection fuse. There is a fuse; F1 for the "Cx +" jack. For access to fuses, remove the two screws from the back of the meter and lift off the front case. Replace F1 only with the original type 0.25A/250V fuse.

## Maintenance

### Periodic service



### WARNING!

Repair and service of this instrument is to be performed by qualified personnel only. Improper repair or service could result in physical degradation of the meter. This could alter the protection from electrical shock and personal injury this meter provides to the operator. Perform only those maintenance tasks that you are qualified to do.

These guidelines will help you attain long and reliable service from your meter:

1. Calibrate your meter annually to ensure it meets original performance specifications.
2. Keep your meter dry. If it gets wet, wipe it dry immediately. Liquids damage electronic circuits.
3. Whenever practical, keep the meter away from dust and dirt, which can cause premature wear.
4. Although your meter is built to withstand the rigors of daily use, it can be damaged by severe impacts. Use reasonable caution when using and storing the meter.

**NOTE:** When servicing the meter, use only the replacement parts specified.

### Cleaning and Decontamination

Periodically clean your meter's case using a damp cloth. **DO NOT** use abrasives, cleaning solvents or strong detergents, as they may damage the finish or affect the reliability of the structural components.

### Battery Replacement

Always use a fresh replacement battery of the specified size and type. Immediately remove the old or weak battery from the meter and dispose of it in accordance with your local disposal regulations. Old or defective batteries can leak chemicals that corrode electronic circuits.



### WARNING!

To avoid electric shock, be sure to turn off the meter's power and disconnect both test leads from any equipment before you remove or install batteries.



### WARNING!


Under **NO** circumstance should you expose batteries to extreme heat or fire as they may explode and cause injury.

**NOTE:** If you do not plan to use the meter for a month or more, remove the battery and store it in an area that won't be damaged by a leaking battery.

## Characteristics

Range	Resolution	Accuracy	Test Frequency
200pF	0.1pF	±1%rdg + 3dgt	820Hz
2000pF	1pF		
20nF	10pF		
200nF	100pF		82Hz
2uF	1nF		
20uF	10nF		
200uF	100nF	2%rdg + 3dgt	8.2Hz
2000uF	1uF		
20mF	10uF		

## Specifications

Auto power off:	After meter operation approx. 10 minutes, auto power off circuit
Test Voltage:	<3.5 V
Input protection:	0.25 A/250 V fast action fuse
Zero adjust limited:	±20 pF approx
Shock proof:	New structure, shock proof from 3 meter drop.
Display:	3 1/2 digit liquid crystal display (LCD) with maximum reading of 1999
Polarity:	Automatic, positive implied, negative polarity indication
Over range:	[1] or [-1] is displayed
Zero:	Automatic
Low battery indication:	The "  " is displayed when the battery voltage drops below the operating level
Measurement rate:	2.5 times per second
Operation environment:	0°C ~ 60°C at 70% relative humidity
Storage temperature:	-20°C ~ 60°C, 0 to 80% R.H. with battery removed
Accuracy:	Stated accuracy at 23°C ±5°C, < 75% relative humidity
Power:	Single standard 9 volt battery (NEDA 1604 pr JIS 006P)
Battery life:	200 hours typical with carbon-zinc
Dimension:	150 mm (H) x 70 mm (W) x 38 mm (D)
Weight:	Approx. 170g including battery
Accessories:	One pair test leads, 9V battery, operating instructions



# DCM3

## Capacitance Meter

### Limited Warranty

The DCM3 is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UEi shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss. A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge. Return the unit postage paid and insured to:

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This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

