

DIGITAL CAPACITANCE METER OPERATING MANUAL

1. SPECIFICATION

1) GENERAL CHARACTERISTICS

Measuring Method: Dual-Slope integration A/D converter system

Display Method: LCD display

Maximum Display: 1999 counts (3 ½ digits) with automatic polarity indication

Over-range Indication: "1" figure only in the display

Low-Battery Indication: automatic Low-Battery detect, the symbol "⎓" will display

Measurement Rate: updates 2~3 sec

Zero Adjust: manual-zeroing, about $\pm 20\text{pF}$

Operating Temperature: $0^{\circ}\text{C} \sim 40^{\circ}\text{C}$ $0 \sim 80\%$ R.H.

Storage temperature: $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$ $0 \sim 70\%$ R.H.

Power Supply: 9v battery (IEC 6F22, NEDA 1604, JIS 006p)

Dimensions: 191L \times 89W \times 35H mm

Accessories: test leads (pair), Operator's Manual

2) ELECTRICAL SPECIFICATION ($23 \pm 5^{\circ}\text{C}$, below 80% R.H.)

Accuracy is given as \pm (% of maximum reading + number of least significant digits)

Range	Resolution	Accuracy	Test Frequency
200pF	0.1pF	$\pm (0.5\%C_m + 6\text{dgt})$	800Hz
2000pF	1pF	$\pm (0.5\%C_m + 1\text{dgt})$	800Hz
20nF	10pF	$\pm (0.5\%C_m + 1\text{dgt})$	800Hz
200nF	100pF	$\pm (0.5\%C_m + 1\text{dgt})$	800Hz
2uF	1nF	$\pm (0.5\%C_m + 1\text{dgt})$	800Hz
20uF	10nF	$\pm (0.5\%C_m + 1\text{dgt})$	80Hz
200uF	100nF	$\pm (0.5\%C_m + 1\text{dgt})$	8Hz
2000uF	1uF	$\pm (1.0\%C_m + 1\text{dgt})$	8Hz
20mF	10uF	$\pm (2.0\%C_m + 1\text{dgt})$	8Hz

2. METHOD OF MEASUREMENT

1) PRECAUTIONS AND PREPARATIONS FOR MEASUREMENT

- Be sure that battery and fuse are correctly placed.
- The tested capacitor should be discharged before the testing procedure.
- The polarity of tested capacitor must be same to the input terminal.
- Note: never apply voltage to the input terminal, serious damage maybe result.
- Dot short-circuit two input terminal, or will loss power energy and over-range.
- If the value of tested capacitor is unknown before test, set the Function-range switch to the lowest range and work up.

2) MEASURING

- Set the Function-range to the properly range.
- Measuring the low capacitor, please adjust "ZERO ADJ" for reading accuracy.
- Connect the test capacitor to the input socket or the test leads.
- When only the figure "1" is displayed, over range is being indicated and the Function-range switch has be set to a higher range; When the figure "0" displayed at seniority, set the Function-range to a lower range for higher resolution and accuracy.

NOTE:

- ◇ If the test capacitor is a short capacitor, it will be over-range and only figure "1" is displayed; soaking-out capacitor, the reading will high it's value; open-circuit capacitor, will displayed "0". (maybe $\pm 10\text{pF}$ at the 200pF range)
- ◇ Display value will fluctuated, if a soaking-out capacitor connected.
- ◇ If use other leads measure capacitor, leads will appear a value, please keep in mind before measure; it would be substrate from displayed value.