

Thanks for your patronage. Before using this instrument · Please look through this operation manual in order to get correct operation and acquire best performances · also prevent any possible damage on instrument ·

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I. Specification

1-1 · General Specification

- LCD : 3 1/2 digits LCD a maximum reading of 1999 ·
- Range : 9 test ranges · 200pF–20mF (YF-150) ·
8 test ranges · 2000pF–20mF (YF-151) ·
- Overload Indication :
LCD display "1" in the left highest position ·
- Zero adjustment : $\pm 20\text{pF}$ approx ·
- Display rate : 0.5 second · approx ·
- Power supply : 006P DC 9V Battery 1pc ·
- Battery life : 200 hours approx ·
- Operating Temperature & Humidity :
 $0^{\circ}\text{C} \sim 40^{\circ}\text{C}$ below 80% RH ·
- Storage temperature & Humidity :
 $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ below 70% RH ·
- Dimension & Weight :
120(L) x 72(W) x 37(H)mm · 185 g approx · with batteries (YF-151) ·
143(L) x 74(W) x 39(H)mm · 267g approx · with batteries (YF-150) ·
- Accessories : Operating instruction manual · Test leads · 006P 9V battery 1 pc ·

1-2 · Electrical Specifications($23^{\circ}\text{C} \pm 5^{\circ}\text{C}$, below 80%RH)

Accuracies: $\pm(\text{.....rdg} + \text{.....dgt})$

Rang	Resolution	Accuracy	Maximum display	Test frequency	Overload protection
200pF	0.1pF	$\pm (0.5\%+1+0.5 \text{ pF})$	199.9pF	819.2Hz	0.1A/250V Fuse
2000pF	1pF		1999pF		
20nF	10pF		19.99nF		
200nF	100pF		199.9nF		
2 μF	1nF		1.999 μF		
20 μF	10nF		19.99 μF		
200 μF	100nF	199.9 μF	81.92Hz		
2000 μF	1 μF	$\pm (1\%+1)$	1999 μF	8.912Hz	
20mF	10 μF		19.99mF		

※ pF=10⁻¹²F, nF=10⁻⁹F, uF=10⁻⁶F, mF=10⁻³F, Test voltage < 3.2V

II. Operation

2-1 Notes

1. Check if the battery and fuse are installed correctly ·
2. Be sure that the capacitor is fully discharged before being

tested ·

3. Check if the positive and negative polarities of the capacitor are corresponding to the one of socket indications ·
4. Do not input the voltage to the two ends under tested in order to avoid damaging the capacitance meter ·
5. Do not short the " + " and " - " ends of capacitance meter to avoid power consumption and lead to over-load sign ·

2-2 · Operation

1. Select the correct range with rotary switch ·
2. Before measuring low capacitance (i.e.200pF · 2000pF · 20nF) adjust the zero adjustment knob · if by test lead · do plug the test lead into socket · then adjust the zero adjustment knob · within the limits of $\pm 20\text{pF}$ · (YF-150)
3. Discharge the capacitor by shorting two pin of capacitor · you can use the voltage range of multimeter to confirm that · the under tested capacitors are fully discharged ·
4. Plug capacitor into socket directly or connect to the test leads for measurement ·
5. Read the value from the LCD ·
6. When LCD display "1" which means the under test is over the selected range and must select a higher range · the figure "000"means it should be to a lower range for measurement in order to have a reliable resolution and accuracy ·

2-3 Consideration of measurement condition

1. For low capacitance · plug the capacitor in directly for better accuracy and avoid the existence of drifting capacitance ·
2. If capacitor is measured by test leads · There will be some capacitance existing in the test leads · if the value can not be zeroed · record that existing capacitance value before measurement and then calculate the correct value · the negative existing value of test lead should be added and positive value should be reduced from the obtained value in order to finalize the real value ·
3. In case the leakage occurs in the capacitor under test · the shown value will flick ·

III. Maintenance

3-1 Battery Replacement (YF-151)

As battery power is not sufficient · LCD will display "E3" · replace battery to keep measurement accurate ·

1. Turn the function range selector to OFF ·
2. Use a screwdriver to unscrew the secured on rear cover · take out the battery and install a new one ·
3. Place back the rear cover and secure by a screw ·

3-2 · Battery Replacement(YF-150)

As battery power is not sufficient · LCD will display "BAT " · replace battery to keep measurement accurate ·

1. Turn the function range selector to OFF ·
2. Open the battery cover according to instructed · take out the fuse, and install a new one ·
3. Secure the battery cover ·

3-3 · Fuse Replacement (YF-151)

If replacement is required · please replace with a same one rated 0.1A/250V · 5*20mm to keep circuit protect normally ·

1. Turn the function range selector to OFF ·
2. Use a screwdriver to unscrew the secured on rear cover · take out the burned fuse and install a new one
3. Place back the rear and secure by a screw ·

3-4 · Fuse Replacement(YF-150)

If replacement is required, please replace with a same one rated 0.1A/250V · 5*20mm to keep circuit protected normally ·

1. turn the function range selector to OFF ·
2. Open the battery cover according to instructed · take out the battery, and install a new one ·
3. Secure the battery cover ·

3-5 · Maintenance

When in long time storage take out the battery and avoid conditions of high temperature and humidity ·

DIGITAL CAPACITANCE METER



User's manual