

### 3. Maintenance

#### 3-1 Battery Replacement (YF-151)

- (1). As battery power is not sufficient ,LCD will display "E" ,replace battery to keep measurement accurate.
- (2). Turn the function range selector to OFF.
- (3). Use a screwdriver to unscrew the secured on rear cover ,take out the battery and install a new one.
- (4). Place back the rear cover and secure by 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 ,5X20mm to keep circuit protect normally.

Turn the function range selector to OFF.

Use a screwdriver to unscrew the secured on rear cover, take out the burned fuse and install a new one.

Place back the rear and secure by a screw.

#### 3-4 Fuse Replacement (YF-150)

If replacement is replace with a same one rated 0.1A/250V ,5X20mm to keep circuit protected normally .

Turn the function range selector to OFF.

Open the battery cover according to instructed ,take out the battery ,and install a new one.

Secure the battery cover.

#### 3-5 Maintenance

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

#### TENMARS ELECTRONICS CO., LTD

6F, 586, RUI GUANG ROAD, NEIHU,TAIPEI 114,TAIWAN.

E-mail: [service@tenmars.com](mailto:service@tenmars.com)

<http://www.tenmars.com>

# TENMARS



## DIGITAL CAPACITANCE METER

### YF-150 / YF-151

### OPERATING MANUAL



HB2YF0015113

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.

## 1. 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 ,  $\pm 20$ pF approx.
- Display rate : 0.5second ,approx.
- Power supply : 006P DC 9V Battery 1pc.
- Battery life : 200hours approx.
- Operating Temperature & Humidity :  
0°C~40°C below 80%RH.
- Storage temperature & Humidity :  
-10°C~ 60°C below 7% RH.
- Dimension & Weight: 120(L)x 72(W) x37(H) ,185g approx ,with batteries(YF-151) ,143(L) x74(W) x39(H)mm ,267g approx ,with batteries (YF-150)
- Accessories : Operating instruction manual ,Test leads ,006P 9V battery 1PC.

### 1-2 Electrical Specifications(23°C +-5°C,below 80%RH) Accuracies : $\pm$ (.....rdg +.....dgt)

Rang	Reso- lution	Accuracy	Maxi mum displ ay	Test frequency	Overload protection
200pF	0.1pF	$\pm(0.5\% +1+0.5 \text{ pF})$	199.9 pF	819.2Hz	0.1A/250V Fuse
2000 pF	1pF		1999 pF		
20nF	10pF	19.99 nF	81.92Hz		
200nF	100pF	199.9 nF			
2 $\mu$ F	1nF	1.999 $\mu$ F	8.912Hz		
20 $\mu$ F	10 nF	19.99 $\mu$ F			
200 $\mu$ F	100nF	199.9 $\mu$ F	8.912Hz		
2000 $\mu$ F	1 $\mu$ F	1999 $\mu$ F			
20mF	10 $\mu$ F	19.99 mF			
※ pF=10 <sup>-12</sup> F, nF=10 <sup>-9</sup> F, uF=10 <sup>-6</sup> F, mF=10 <sup>-3</sup> F, ※ Test voltage < 3.2V					

## 2. 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.
- (5). Do not input the voltage to the two ends under tested in or derto avoid damaging the capacitance meter.
- (6). Do not short the "+" and "-" ends of capacitance
- (7). 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 (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  $\pm 20$ pF.(YF-150)
- (3). Discharge the capacitor by shorting two pin of capacitor ,
- (4). You can use the voltage range of multimeter to confirm that ,the under tested capacitors are fully discharged.
- (5). Plug capacitor into socket directly or connect to the test leads for measurement.
- (6). Read the value from the LCD.
- (7). When LCD display "1" which means the under test is over.
- (8). 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, 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.