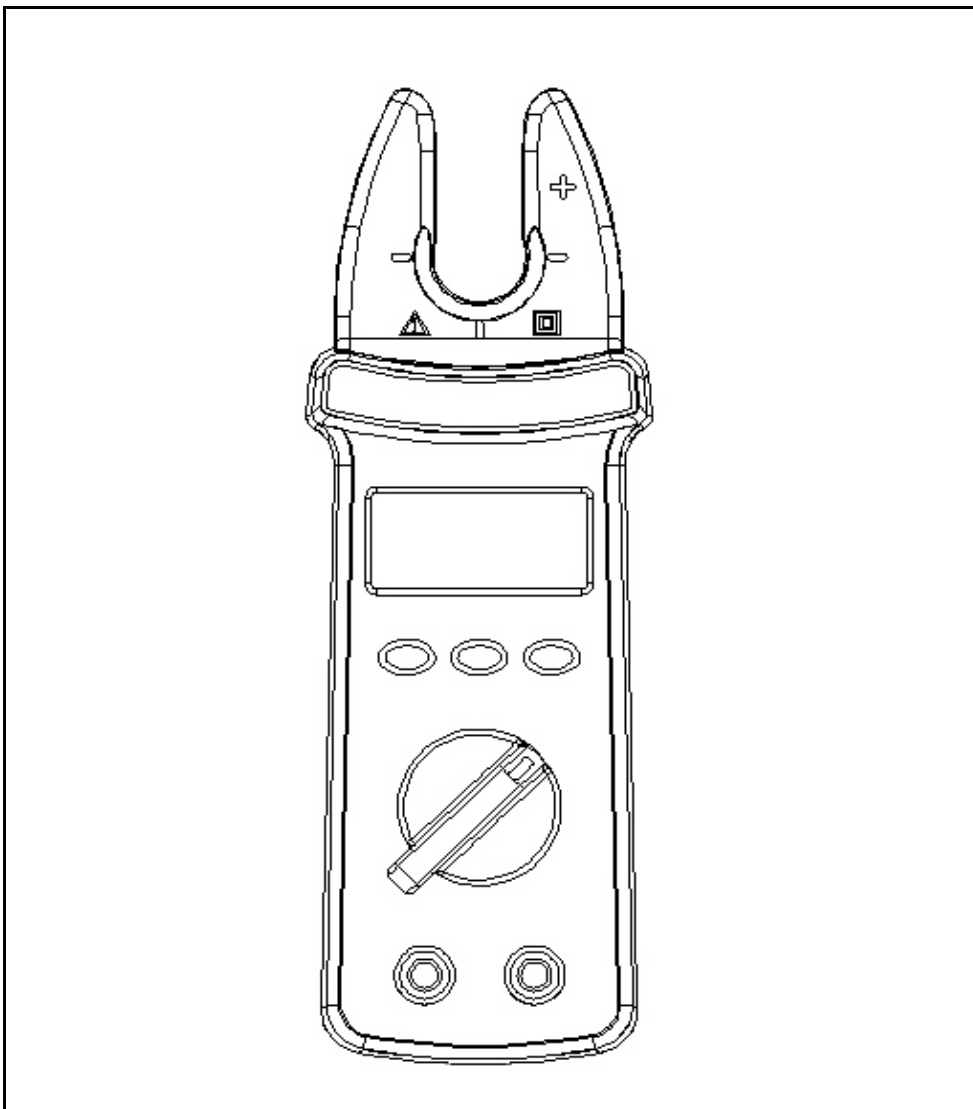


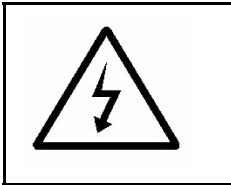
*2,000 counts, 200 Amp ACA/DCA, 600 V ACV/DCV,
True RMS, OHMS, Continuity, Hold, Peak Hold*

FORK CURRENT TESTER

Model : FT-9950



Caution Symbol



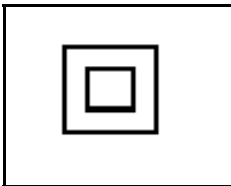
Caution :

- * Risk of electric shock !

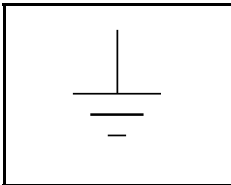


Caution :

- * Do not apply the overload voltage, current to the input terminal !
- * Remove test leads before open the battery cover !
- * Cleaning - Only use the dry cloth to clean the plastic case !



- * Double insulation



- * Function earth

Environment Conditions

- * Jaw Section : CAT III 600 V, 600 A.
- * Terminal : CAT II 600 V.
- * Pollution Degree 2.
- * Altitude up to 2000 meters.
- * Relative humidity 80% max.

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1. FEATURES

- * Use the fork current sensing structure, when make current measurement it not necessary to open the jaws as the traditional clamp meter, easy operation.
- * 200 Amp ACA, DCA for fork current measurement
- * Design meet IEC 1010 CATIII 600V safety requirement.
- * 2000 counts, multi-functions.
- * Measurement for ACA, DCA, ACV, DCV, Ohms, Continuity beeper.
- * True RMS measuring reading for ACV and ACA function.
- * Data hold.
- * Peak hold.
- * Overload protection circuit is provided for all range.
- * LSI circuit provides high reliability and durability.
- * Pocket & slim housing case, easy carryout.
- * Compact & heavy duty ABS housing fireproof plastic case.



2. SPECIFICATIONS


2-1 General Specifications

Display	12.2 mm (0.48") LCD, 3 1/2 digits, Max. indication 1999.
Measurement Range	ACA, DCA, ACV, DCV, Ohms, Continuity beeper.
Polarity	Automatic Switching, " - " indicates negative polarity.
Current Sensor	Hall effect sensor.
Zero adjustment	DCA : Push bottom adjustment. Other ranges : Automatic adjustment.

Over-input	Indication of " OL ".
Sampling Time	Approx. 0.35 second.
Battery	006P DC 9V battery.
Operating Temperature	0 to 50 °C (32 to 122 °F).
Operating Humidity	Less than 80% RH.
Weight	205 g/0.45 LB (including battery).
Dimension	HWD : 176 x 60 x 41 mm (6.9 x 2.4 x 1.6 inch)
Max. Fork Jaw Open Size	15 mm (0.59 inch) Dia.
Accessories Included	Operation manual..... 1 PC. Test lead (red & black)..... 1 PC.
Optional Accessories	Carrying case, CA-52A

2-2 Electrical Specifications (23± 5 °C)

Function	Range	Resolution	Accuracy	Overload Protection
DCV ACV (true rms)	600 V	1 V	DCV : ± (0.8 % + 1d) ACV : ± (1 % + 2d)	 AC/DC 600V
DCA ACA (true rms)	200 A <i>ACA :</i> 0.5 to 200A	0.1 A	DCA ± (2 % + 5d) ACA ± (2 % + 8d)	 AC/DC 200A
Remark	<ul style="list-style-type: none"> * True RMS measuring reading for ACV and ACA function. * Input impedance for ACV & DCV range is 9 Meg ohm. * ACA, ACV frequency response is from 40 to 1 KHz. * ACA, ACV specification be tested on sine wave 50/60 Hz. 			

Function	Range	Resolution	Accuracy	Overload Protection
Ohms	200 ohm	0.1 ohm	$\pm (1 \% + 2d)$	 AC/DC 400V
Continuity	If measuring resistance is less than 10 ohm, the beeper will sound .			
Peak Hold	Acquisition Time: Approx. 800 ms. Application: Use for measuring transient signal for current.			

Remark :

** Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.*

3. FRONT PANEL DESCRIPTION

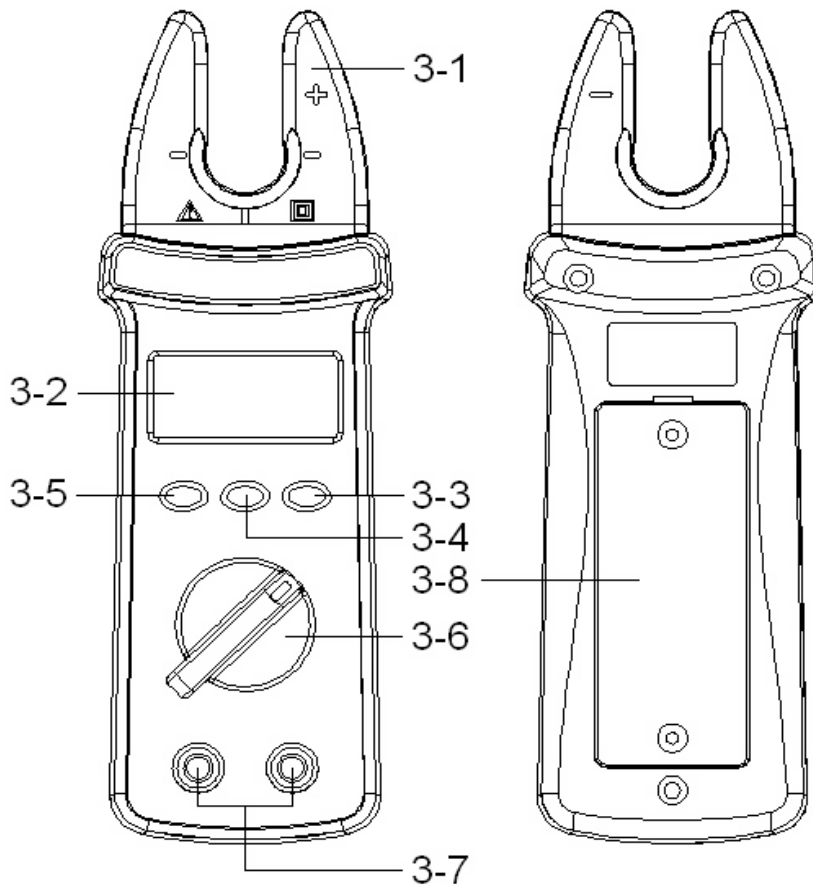


Fig. 1






- 3-1 Current Sense Fork Jaw
- 3-2 Display
- 3-3 Peak Hold Button
- 3-4 Data Hold Button
- 3-5 DCA Zero Button
- 3-6 Function Rotary Button
- 3-7 Input Terminals
- 3-8 Battery compartment/Cover

4. PRECAUTIONS & PREPARATIONS FOR MEASUREMENT

- 1) Ensure that the DC 9V battery are connected with the right polarity and placed in the battery compartment correctly.
- 2) Place the Red & Black Test Leads into the proper input terminal before making measurement.
- 3) Remove either of the test leads from the circuit when changing the measurement function.
- 4) Except operate the " Data Hold " function, it should cancel the " Data Hold " function, otherwise the display reading will freeze permanently.
- 5) Do not exceed the maximum rated voltage to the input terminal.
- 6) Always switching the " Function Rotary Switch " to the " OFF " position when the instrument is not operation.
- 7) Remove the battery if the instrument is not to be used in a long period of time.
- 8) Though the most ranges build the overload protection circuit, however it is prohibited to apply any voltage to input terminal when making the measurement.
- 9) For safety consideration, when change the new test leads, it should use the replace test leads that already approval of " CATIII-600V " at least.

5. MEASURING PROCEDURE

5-1 Symbols & units of display

Symbols / Units	Descriptions
AC 	Appears when selecting ACV & ACA mode.
	Appears when the " Data hold " function is operated.
	Battery voltage is under the low condition already.
	Appears when execute the ohm function and the measuring resistance < 3 ohm.
V	Units for voltage measurements.
Ω	Units for resistance measurements.
—	Appears when measuring a DCV or DCA value is negative.
A	Units for " Current " measurement.
	Appears when the " Peak Hold " function is operated.

5-2 DCV, ACV Measurement

- 1) Connect BLACK test lead into " COM " terminal.
- 2) Connect RED test lead into " V Ω " terminal.
- 3) If measure " DCV ", select the " Function rotary switch " (3-6, Fig. 1) to the " V \equiv " position
- 4) If measure " ACV ", select the " Function rotary switch " (3-6, Fig. 1) to the " V \sim " position, the display (3-2, Fig. 1) will show the " AC \sim " indicator.

5-3 Resistance Measurement

- 1) Connect BLACK test lead into " COM " terminal.
- 2) Connect RED test lead into " V Ω " terminal.
- 3) Select the " Function rotary switch " (3-6, Fig. 1) to the " Ω \cdot || " position, the display (3-2, Fig. 1) will show the " Ω " indicator.

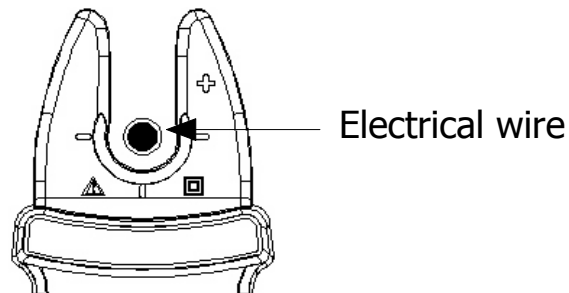
5-4 Continuity Check

- 1) Connect BLACK test lead into " COM " terminal.
- 2) Connect RED test lead into " V Ω " terminal.
- 3) Select the " Function rotary switch " (3-6, Fig. 1) to the " Ω \cdot || " position.
- 4) When the resistance value is less than 3 ohm, the beeper sound will be generated, the display (3-2, Fig. 1) will show the " \cdot ||| " indicator.

5-5 AC Current Measurement

- 1) Select the " Function rotary switch " (3-6, Fig. 1) to the " A \sim " position , the display (3-2, Fig. 1) will show the " AC \sim " indicator.

- 2) Put the electrical wire that intend to make the ACA measurement into the center of " Fork Jaw " (3-1, Fig. 1)



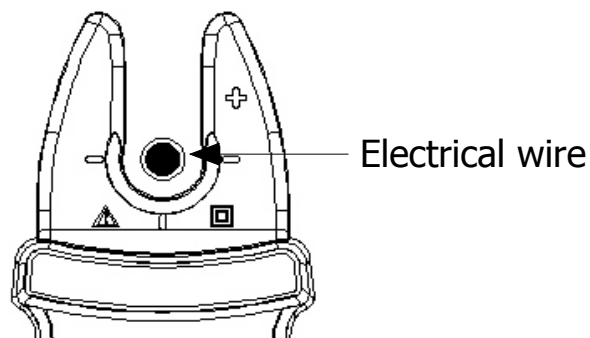
Remark :

No ACA signal input, if the display show few counts (less than 0.5 A, such as 0.2 A, 0.3 A...), it is normal & not effecting the measurement value.

- 3) The reading that show on the display is the true rms value.

5-6 DC Current Measurement

- 1) Select the " Function rotary switch " (3-6, Fig. 1) to the " A $\overline{=}$ " position.
- 2) Put the electrical wire that intend to make the DCA measurement into the center of : Fork Jaw " (3-1, Fig. 1)



ZERO consideration of DCA measurement

Under DCA measurement, no signal input (not measuring current), if LCD show certain digits (< 10 digits), it is normal.

However we recommend :

- 1) If the zero value less than 1 A, it may ignore it, if for the general operation.
- 2) For the precise measurement or the " DCA zero value " large than 1A, then please execute the " DCA ZERO " procedures as :
 - * Push the " DCA ZERO Button " (3-5, Fig. 1), display will change to zero value.

5-7 Data Hold Operation

- 1) During the measurement, pushing the " DATA HOLD Button " (3-4, Fig. 1) once a while will freeze the measured value & the LCD will indicate " H " symbol.
- 2) Push the " DATA HOLD Button " again to release the data hold function.

5-8 Peak Hold Operation


- 1) Before the measurement, pushing the " PEAK HOLD Button " (3-3, Fig. 1), then LCD will indicate " PEAK " symbol.
- 2) After finish the above procedures, then go to make the measurement. During the measurement, the tester will record the max. reading value on LCD.
- 3) Push the " PEAK HOLD Button " (3-3, Fig. 1) again to release the PEAK HOLD function.

6. MAINTENANCE

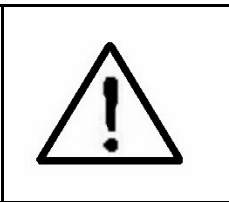
6-1 Battery replacement



Caution : *Remove test leads before opening the battery cover !*

- 1) When the LCD display showing the mark of " , it is necessary to replace the battery, However in-spec. measurement may still be made for several hours after " Low battery indicator " appears before the instrument become inaccurate.
- 2) Open the screw of " Battery Cover " (3-8, Fig. 2) by screwdriver, then move the battery.
- 3) Replace with 9V battery and reinstate the cover.

6-2 Cleaning



Caution : *Cleaning - Only use the dry cloth to clean the plastic case !*

7. THE ADDRESS OF AFTER SERVICE CENTER

