



We thank you for purchasing our company's ACA/DCA clamp meter. This product conforms to the safety design standards of IEC 1010. This meter is a general purpose meter used in various applications. The clamp part is used to measure a broad range of direct and alternating current values, while the test leads are employed to measure voltage, resistance and diode voltage.

We ask you to carefully read and understand this manual before using to guide you on how to gain the outmost benefits of all its function and uses.

Please keep this manual for future reference.



## SAFETY INDICATION

Please strictly observe the safety instructions during the use of this product. Read the precautionary instructions written next to the symbol indicating the caution mark of this manual.

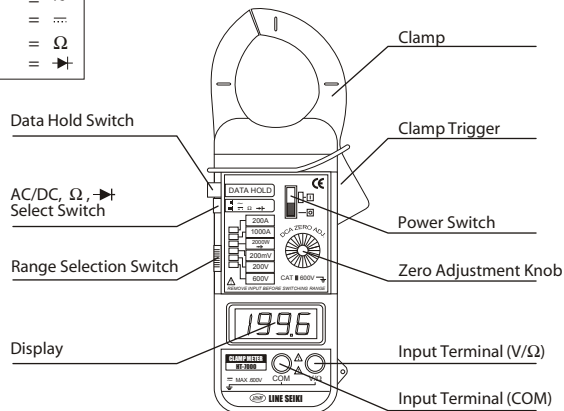
### Caution

- Please do not drop or subject this to a strong shock.
- Do not immerse this unit in water or any liquids. This product is not water proofed.
- Do not leave this instrument inside cars, buses and other vehicles during warm days.
- Do not expose the product into dust, high temperature and humidity, or direct sunlight.
- Make sure to remove the test leads when changing the battery.
- Always use a reliable battery.
- Turn off the power when the product is not being used. If the product is not to be used for a long time, please remove the battery.
- Avoid disassembling the product. If product failure occurs, ask for technical assistance.

## PROCEDURES

### 1. Front Panel Description

Power On	= 1
Power Off	= 0
AC (alternating current)	= ~
DC (direct current)	= —
Resistance	= Ω
Diode	= ▶



### 2. Measuring Procedure

#### 1. DCV / ACV Resistance Measurement

1. Select the function to use on the "AC / DC", Ω, ▶ switch
2. Connect the red test leads to the "V / Ω" input terminals, while the black test lead to the "COM" input terminal.
3. Choose the range limit that will be used.
4. Turn on the power
5. Place the tips of test leads to the measuring object. Once the display stabilizes, take the reading.

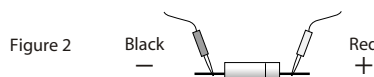
### Warning

- Avoid moist air, water and other liquids so adhere on the meter during use.
- Please do not touch the meter when your hand are wet.
- Please connect the black and red test leads leads to the input terminals correctly before starting to measure.
- Do not hold function of the meter will work unless the power supply is cut.
- Do not supply volatage or current more than the allowed maximum input capacity

#### 2. DIODE Test

Please do the process below after following the described procedures established in Figure 2-1.

- a. If the red test lead is connected as shown in figure 2.  
The meter will display the appropriate diode voltage in unit volts.  
If the diode is defect, "0.000" or a value near this value, or "1" will be displayed.



- b. If the test leads are connected in the reverse position as shown in figure 3.  
The testing is correct but the reading will display "1". In case the diode is defect, "0.000" or other values will be displayed.



Please carry out both test described in (a) and (b) when checking diodes.

#### 3. ACA / DCA Measurement

1. Slide the switch to the "on" position.
2. Set the object to measure, then select the function to use in "AC / DC", Ω, ▶ switch.
3. Select a higher range than the value of the current using the Range Select switch.

#### ✳ Measuring Consideration

If it is difficult to anticipate the maximum value of the current to measure, select the highest range first and the gradually lower this unit until a suitable reading is obtained.

4. In case of measuring in DC current, adjust the DCA Zero Adjustment Knob until the displays show "0".
5. Open the clamp and insert the wire to measure. If the display stabilizes, take the reading.

#### Measuring Consideration

Right after taking a current measurement, residual magnetic force may still be present in the clamp meter. In such cases, the display shows "0" when adjusting the DCA Zero Adjustment Knob. To remedy this effect, follow any of the procedures below :

- a. Take again the reading of the object previously measured but allow the current to flow in reverse direction.
- b. Open then close the clamp repeatedly

#### 4. Data Hold Operation

This is a switch that holds the data when measuring. Press the Data Hold Switch once then the meter will hold the value on the reading. Any change in the input signal will not change the reading on the display. Pushing the switch again will disable the data hold function.

### 3. Battery Replacement

1. When the upper left corner of the LCD display shows "LO BAT", the battery needs to be replaced.
2. Open the screw of the battery cover by screwdriver, then remove the battery.
3. Replace the battery with a new one and position this new battery correctly inside the meter's battery compartment.
4. Fasten back the cover.

\* The instrument cannot measure accurately after low battery indicator is displayed. Please replace the battery immediately.

### 4. Cleaning

Wipe off dust, and other dirt on the unit using a dry cloth.

### Caution

- Please do not wipe the unit with benzene or thinner, this may cause the unit to easily break and produce white marks on the chasis.

## SPECIFICATIONS

### 1. General Specifications

Display	: 13 mm, LCD, 3 1/2 digits display
Measuring Functions	: DC/AC current plus voltage, resistance, diode test, data hold function
Polarity	: Automatic Switching, "-" indicates negative polarity
Current Sensor	: Hall Effect Sensor
Zero Adjustment	: DCA ... Manual Adjustment    Other Ranges ... Automatic Adjustment
Out of Range Indicator	: Displays "1" or "-1"
Sampling Time	: Approximately 0.4 seconds
Power Supply	: 006P, MN1604 (PP3) or equivalent ... 1 piece
Battery Life	: Approximately 50 hours
Operating Conditions	: 0~50°C, less than 80% RH
Dimensions	: Main Unit ... 230 (H) × 70 (W) × 36 (D) mm    Clamp ... 34mm in diameter
Weight	: Approximately 400 grams (Battery is included)
Accessories	: Instruction Manual ... 1 piece, Test Leads (red and black) ... 1 set, Battery ... 1 piece

### 2. Electrical Specifications

Function	Range	Resolution	Accuracy	Overload Protection
DC Voltage	200mV	0.1mV	± (1% + 1d)	△ AC/DC 400V
	200V	0.1V		△ AC/DC 600V
	600V	1V		
AC Voltage	200V	0.1V	± (1% + 2d)	△ AC/DC 600V
	600V	1V		
Resistance	2KΩ	1Ω	± (1% + 1d)	△ AC/DC 400V
AC/DC Current	200A	0.1A	± (1.5% + 1.5d)	△ AC/DC 1000A
	1000A	1A		
Diode Test	Short / non conductive, good / defective test			

#### Test Conditions

- Input Impedance for ACV / DCV is 10MΩ. ACA / ACV frequency response is from 40 to 400Hz.
- ACA / ACV specifications are tested at sine wave 50/60Hz. Tested at 23±5°C.
- Specifications are tested under the following environment : electromagnetic field strength of below 3V/m and frequency less than 300MHz.



37-7, 2-chome, Chuo-cho, Meguro-ku, Tokyo, 152-0001 JAPAN  
Tel: +81-3-37165151 Fax: +81-3-3710455  
E-mail : webtrade@line.co.jp  
URL : http://www.line-seiki.com

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