

# INSTRUCTION MANUAL

## MODEL HCL-3000+

### DIGITAL CLAMP TESTER

#### 1. FUTURES

- ✧ Provides the wide range of current measurement from 1mA to 200A.
- ✧ Useful one hand operation with the extended safety handle.
- ✧ Provides the safety current measurements on circuits having internal voltage from AC 80V to AC 7000V.
- ✧ Data-hold function is especially useful when working in dark or hard to get areas.
- ✧ AC 14KV(1 minute) withstanding voltage between jaw core and handle.

#### 2. CAUTION

- ✧ This model is high precision measuring instrument. It may cause defect, if the CT part receives damages.
- ✧ To avoid electrical shock, operate this instrument very carefully, especially for the measurement of the circuit with more than AC 1000V.
- ✧ When the rubber cover of the handle is damaged, replace it to new one immediately.
- ✧ When [B] sign appears on the display during the use of this instrument, replace the batteries to new ones, as the operation voltage gets below than normal use for the measurement.

#### 3. CARRY AND STORAGE

- ✧ Take care not to drop down the instrument and or not to load heavy weight and or strong shock to the instrument.
- ✧ Do not apply chemicals to this instrument.
- ✧ Do not leave this instrument on the road and or the place under the direct sunshine during summer and also do not leave it in the high temperature place, such as inside of the car, etc.
- ✧ Keep the instrument clean and choose the storage place where is dry and not getting direct sunshine.

#### 4. SPECIFICATIONS

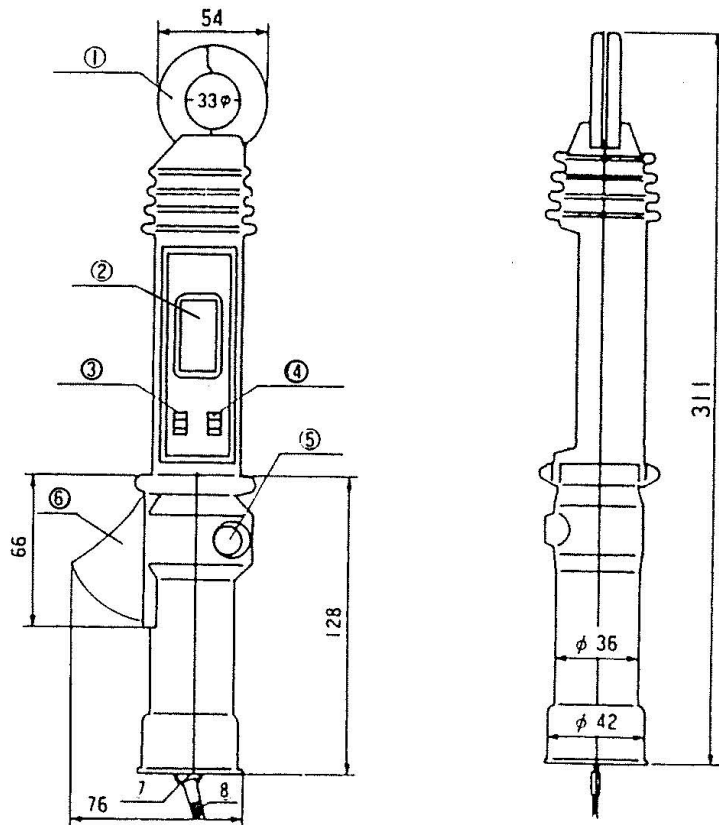
Measuring Method :Dual integration mode  
 Measuring Function :AC Current by clamping CT  
 Display :3.5 digit LCD  
 Measuring Range 0-2000mA/20A/200A (50/60Hz)  
 Accuracy :23°C±5 °C , 80%RH or less

Range	Resolution	Accuracy
2000mA	1mA	±2% rdg±5dgt
20A	10mA	
200A	0.1A	

Jaw Opening Capability: : φ 33mm  
 Overload Indication: :Blanking of all digits except MSD 1  
 Data Hold :“DH” mark on the display for holding the measurement value.  
 Low Battery Indication :“B” mark on LCD readout, when the voltage below than 1.3V ±0.1V  
 Sampling :2 times/second  
 Operation Circuit Voltage :AC 80V – 7000V  
 Insulation Resistance :10M ohm or more (between handle and CT core)  
 Withstanding Voltage :AC 14KV, 1 minute (between handle and CT core)  
 Power Supply :UM-3 (1.5V) x 2 pcs.  
 Power Consumption :Approx. 2.5mW  
 Weight :Approx. 285 gs. (excluding batteries)  
 Accessories Carrying case.....1  
 Instruction Manual.....1  
 Batteries.....2

## 5. DIMENSIONS & PANEL

1. Clamp CT : CT sensor detecting the current by clamping method.
2. Display : LCD readout the measurement value, “B” battery sign and “DH” data hold mark.
3. Power Switch : Switch for power on and off.
4. Range Switch : Switch for range selection of 2000mA/20A/200A
5. Data Hold Switch : Push once this switch to hold the data and “DH” mark will appear on the display. Push once again to release.
6. Open/Close Lever : Push this cover to install or replace batteries.
7. Battery Cover : Remove this cover to install or replace batteries.
8. Handstrap : Apply this strap to the wrist to avoid falling down the instrument



## 6. METHOD OF MEASUREMENT

### 6-1 INSTALMENT OF BATTERIES

1. Confirm the power switch [off].
2. The battery cover is set by screw-method and turn it to the left for removing the cover.
3. Install the batteries according to the indication of battery case (do not mistake to place + & - polarity).

### 6-2 PREPARATION BEFORE MEASUREMENT

1. Before using, check if there are not damage nor unusualness on the instrument.
2. Check the battery power by switching power on. When “B” mark on the display, replace the batteries to new ones.
3. Put on the insulated rubber gloves in case of the measurement for high voltage circuit.

### 6-3 MEASUREMENT

1. Set the range selector switch to arrange appropriate to the current to be measured.
2. Open the CT by pushing the lever and clamp it to the conductor completely.
3. Read the measured value on the display (In case of over range, the max. digit of “1” is flashing). In the place of hardly reading the display value, use data hold function.

### 6-4 CAUTION FOR MEASUREMENT OF HIGH VOLTAGE CIRCUIT

Do not use this instrument for the following conditions:

- ◇ Bare Terminals
- ◇ In the rain and or soaking the instrument
- ◇ 2 Conductors contacting the CT at the same time
- ◇ Do not touch any part of the instrument except for handle, during operation

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