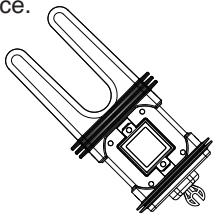


# Digital Clamp Current Tester for High Voltage HCL-36UX

## English Manual (ver. 1.70)

Thank you very much for purchasing HCL-36UX. Before using, read this instruction manual carefully and use it correctly. In order to refer the instruction manual anytime, keep it always at a safe and available place.



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**MULTI**  
Let's Create  
New Concepts of  
Instruments

## Warranty Sheet

In a case of failures, due to manufacturing defects, contact the shop/ distributor where you purchased product or directly inform us. The warranty period of this product is one year from the date of purchase.

### Warranty

[User Information]  
Street Address:  
Full Name:  
Model :HCL-36UX  
Serial number :  
Warranty period:15month after shipment by factory  
Distributor/ shop name:

**Note** • This warranty sheet is required for after-sales service.  
• This warranty sheet is not to be reissued. For your convenience, fill in above information and keep it with the end user of the instrument.

### Warranty policy

- In cases of a malfunction occurs during normal use, within the warranty period, it is to be repaired free of charge, based on the warranty provisions.
- The warranty sheet is not to be reissued.
- Even during the warranty period, under the following circumstances, items are not to be repaired free of charge.
  - Failure due to improper handling
  - Failure due to handling and use, outside design specifications
  - Failure due to modifications or repairs other than our company or those commissioned by our company
  - Other failures not considered to be manufacturing defects

## For Safe Use

In order to use this instrument safely, follow this instruction manual strictly and attention to following cautions and warnings described below.

### Warning

In cases of misused, it causes serious injury to the body or danger to the life of the end-user. Pay extra attention when used.

### Cautions

If it is misused, it causes damage to the instrument. Or it disturbs the function of the instrument as specified.

### Warning

- There is a risk of electric shock.
- Never use on power lines. It may cause an accident.
- Before using, be sure to follow insulation distances specified by each electric power company. Connect to an insulating rod with a necessary length. Never use this unit alone in order to avoid accidents.
- Secure firmly with a screw which is strong enough to support weight of the unit and the insulating rod, in order to prevent it from falling off. \*If dropped, the shock may cause damage to workers or surrounding facility.
- Never hit the ground after use. It may cause malfunction.
- Check whether the surrounding environment is safe before use.
- High voltage circuits are extremely dangerous. For user without specialized knowledge, avoid using the instrument.
- Even while operating a smartphone or a display, ensure the safety of the unit connected with the insulation rod. If the unit falls at the top of the insulation rod, it may lead to an unexpected accident.
- For safety, use it on a distribution line of AC 36kV or less. It is very dangerous if the line carrying voltage exceeds 36kV due to overvoltage.
- If the temperature of the measuring covered conductor exceeds 100°C, due to overvoltage or so on, avoid using. It may lead to damage to the unit.
- Do not use without the rubber cover or the battery cover that protects the CT part.
- Do not use when the rubber cover is torn, cracked or having an abnormality.
- Due to safety reasons, do not use under abnormal condition, such as rain, lightning, eruption, storm, earthquake or tsunami.
- Do not use at bus bars.
- Do not push into a covered electric wire, larger than the inner diameter of the unit.
- Do not use with damages on to the instrument or the insulating rod.

- Do not use for any purpose other than measuring electrical currents.

### Caution

- If the unit becomes dirty, use a soft cloth with moistened water or a neutral detergent in a small amount and wipe lightly. Do not use abrasive or machine solvents. At the cover parts, it may cause deterioration of insulation condition.
- Do not use if water gets inside or its surface is wet.
- Do not wash by immersing it in water or in similar liquid.
- Do not dry it in a microwave oven or in similar heaters.
- Do not expose to direct sunlight for a long time. It may cause deterioration of its cover.
- It is NOT dustproof or waterproof structure. Do not use or store in environment with harmful smoke or gas containing salts, sulfur, ammonia components or in ultraviolet light, etc. It may cause malfunction.
- Some kinds of oil may deteriorate the cover part, and it may cause malfunction. Wipe oil away lightly with a soft cloth, moistened with water or a neutral detergent, a small amount.
- Refrain from storing it in an environment where has mold etc.
- Do not store it in an environment that exceeds the specified operating temperature and humidity.
- Do not roast this unit with a firearm such as a lighter
- Cannot be used underwater.
- Do not give a strong shock to the unit.
- Do not use as a lightning rod.
- Do not use as a hammer etc.
- Before measurement, be sure to pair with a display or a smartphone. Without the pairing, it does not show the reading values.
- Insulation condition is secured by an insulating rod. However, depending on the environment, it is recommended to wear insulation gloves. Perform the work, according to each operation rule.

The symbol marks are shown below:

In order to protect the human-body and the unit, refer to the instruction manual and pay close attention.

In order to avoid accidents or malfunction caused by incorrect use, refer to the instruction manual.

The symbol indicates that the Bluetooth wireless technologies are employed.

Trademarks (TM, (R) mark, etc. are not specified in this manual.)  
• Bluetooth is a trademark of Bluetooth SIG, Inc. Multi Measuring Instruments Co., Ltd. uses it under a license agreement with the company.  
• Android and Google Play are trademarks of Google LLC  
• The iOS trademark is used under a license agreement with Cisco Systems, Inc.USA.

## Specification

- iPhone, iPad, iPad mini and iPod Touch are trademarks of Apple Inc., registered in the US and other countries.  
• App Store is a service mark of Apple Inc.
- Electrical Specification  
Electrical Measuring Specification at 50Hz/ 60Hz (Sine wave) with a covered conductor placed at deep inside CT from its center.

Measuring part	Specification
Measurement	AC Load current Harmonics current(in M-tracer)
Measurable harmonics	Fundamental to 25th
Measuring Range	AC 1A~3000A
Range switch	Auto 2range(~330A & ~3000A)
Measuring frequency	50~60Hz
Resolution	0.1A(0-329.9A)/1A(330-3000A)
Measuring Accuracy	±1%rdg±2dgt
AC converting Method	True RMS values by the analog calculation
A/D converting method	Integration Method
Sampling rate	2-times/ second

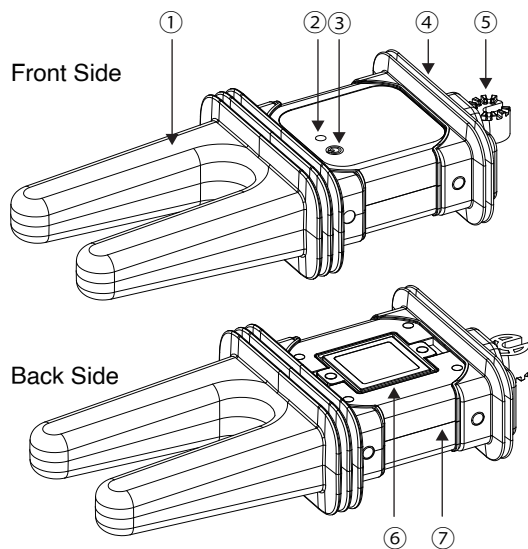
- General Specification

Contents	Specification
Insulation Condition	100MΩ with DC 1kV voltage (Between the CT~ hotstick grip)
Withstanding Voltage	AC43.2kV/5min (Between the CT~ hotstick grip)
Applicable Circuit Voltage	AC36kV(50/60Hz)
Operating Temperature and Humidity Range	-20~60°C 20~96% With lithium battery 5~45°C 20~96% With alkali battery (both w/o condensation)
Measurement of temperature	Reference value displayed at "M-tracer"
CT-shape	U-type
CT inside Diameter	55.4mm
Standard	IP54
Battery	AA(LR6)*4pcs
Operation	Power ON/ OFF (other function is at a paired unit)
Low Battery Indication	Blinking of LED on the main-body
Weight	1550g(with batteries inside)
Size	400*179.6*90.4mm

## Accessory

Contents	Specification
Included items	Instruction Manual
	M-tracer Instruction Manual
	Carrying case
Optional item	Display unit(MDU series)
Excluded items	Smartphone
	Insulation rods

## Name of parts and function



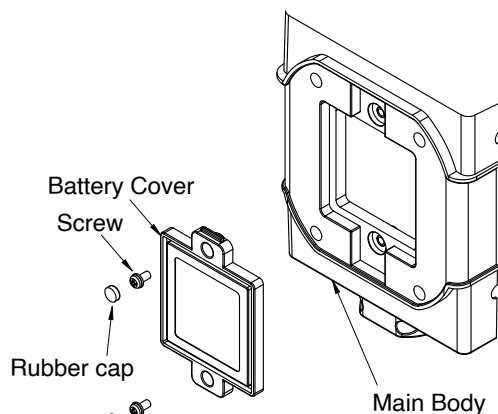
Name of parts	Function
① Upper Clamp-Cover	To protect CT for Detection
② LED light	To display Power On/ Off (or to show the low battery condition)
③ Power Button	To power On/ Off
④ Bottom Cover	To protect the main-body from shock
⑤ Connection Joint	To connect with an insulation rod
⑥ Battery Cover	Open when to replace batteries
⑦ Main Body	To store CT and PCB

## Handling Instruction

### Replacing Batteries

- Be sure to power-off and take off the battery-cover on the back-side and place batteries in right directions.

- Place the battery-cover and secure the cover screws with (+) screw driver.



### Warning

#### Possible electrical shock

- If opening the battery-cover, return to the original position.
- Do not apply to conductors with the battery cover open.

Low Battery Indication; when low battery, LED on the main-body starts blinking.

## Measurements

<1> Press the Power switch to turn on the power.

<2> Pair with the display unit (MDU series or Multi-Tracer).

<3> In case of using the display unit (MDU series), when it pairs successfully, Bluetooth® is displayed on the LCD. For more details, see the instruction manual of MDU series. In case of using Multi-Tracer, in prior, HCL-36UX needs to be registered. After it is registered, the function of selecting measuring points on a map, records of measured values and measuring points is available. The records are on Multi-Tracer or on a server (Basically our server).

If the recording and storage functions are not required, it is available to choose only measurement mode. For Multi-Tracer, it may take some time to register a device. Before using, it will be smooth if you complete your unit registration in prior.

<4> Lead a targeted overhead distribution line of 36kV or below into CT parts of HCL-36UX. Insert the insulated conductor into the deep center of CT.

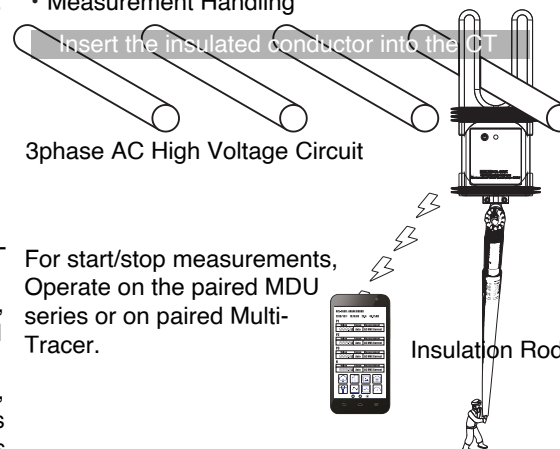
<5> Operate MDU series or Multi-Tracer, select start/stop measurement or switch measurement results at 3-phase 4-wire, and display to check each measured value. As an example, on Multi-Tracer,

the measured value display part of each phase is served as a start/stop button. In addition, on Multi-Tracer, understand that it is not to distinguish which phase is a previously measured value, out of 3-phase/ 3-wires or 3-phase/ 4-wires. On MDU series, it is also not possible to distinguish between the same because it has no recording function.

<6> After the measurement work, move the instrument away from the covered conductor, check the surrounding safety, and press power button of the instrument to power off. Also, on the display terminal, check if the pairing is on or off, in order to confirm the power off. If the pairing is off, the power is off.

### Caution

- When an overcurrent exceeding the measurement range is applied to the CT, it may cause damages to the instrument.
- This instrument is a precision mechanical equipment. When handling, be careful not to apply shock, vibration or excessive stress.
- Measurement Handling



For start/stop measurements, Operate on the paired MDU series or on paired Multi-Tracer.

### Measuring Method

In order to maintain its accuracy, insert the insulated conductor into the center to deep inside CT.

Connected to an insulation rod →

## Bluetooth® function

This unit requires Bluetooth communication.

For the dedicated application "Multi-Tracer" in order to display, record or storage measurements, in prior, download and install Multi-Tracer at APP Store or at

Google play. In order to download Multi-Tracer, because it requires each ID, obtain necessary ID in advance.

For communication costs related to the download, it is not our responsibility. Proceed the download as it is necessary. For obtaining necessary ID, communicate with customer-center of a dedicated mobile-phone company. In addition, we are not responsible for any problems or costs related to downloading. Proceed download and install based on responsibility of its user.

### Caution

- This product has a low power data communication system based on the Radio Law. (Built-in equipment; EYSHCN: 001-A10745)
- The communication range depends on the surrounding environment such as other radio waves and devices.
- This product uses communication frequencies of the 2.4 GHz band. If another wireless devices are using similar communication frequencies near this product, it may disturb wireless communication of both devices. Radio-wave interference may occur. In this case, stop other wireless devices or change the place where this product is used to avoid radio-wave interference.
- Multi-Tracer™ is free of charge. However, the internet connection fee is different for downloading or using the apps.
- The Bluetooth communication function may not works on all mobile terminals. Multi-Tracer™ may not work on all mobile devices. Use of devices with radio-communication requires approval in the country of use, and use of the instrument in a country or a region may be subject to penalty as a violation of related laws.

## After Sales Service

In the unlikely event of failure, please contact your distributor or our agent at where you have purchased. If you contact a distributor or agent which are different from the one you have purchased, it may be difficult to provide our after-sales service. Please be noted.

When you are sending the item for repair, put it in a dedicated packaging box enclosed for this delivery, wrap it sufficiently not to be opened or damaged easily, along with the warranty card including information clearly describing the address, name, and details of the failure, and return to designated retailer/agent where you have purchased the item.