



An ISO 9001:2015 Company

Clamp Leakage Current Meter

User Manual

KM 2008A

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Precaution For Use

Thank you for purchasing **Mini Type Clamp Leakage Current Meter**, In order to better for use of the product, please be certain:

-- Read this user manual in detail.

--Strictly observe the safety regulations and operation cautions list in manual instruction.

- ◆ In any case, shall pay special attention to safety when using this meter.
- ◆ Pay attention to the text labeled word and symbol on the panel and backplane of the meter.
- ◆ Do not place and store the meter in high temperature, humidity, dewy places and under direct sunlight for a long time.
- ◆ When battery voltage is low, please replace the battery in time. Please pay attention to the battery polarity when replacing the battery.
- ◆ When using this meter to test, try to keep the tested wire at the center of the clamp jaw.
- ◆ If not use the meter for a long time, please take out the batteries.
- ◆ Disassembly, calibration, and repair of this meter must be performed by authorized personnel.
- ◆ Due to the reason of this meter, if it is dangerous to continue using, should stop to use and seal the meter immediately ,and handled by an authorized institution.
- ◆ The manual mark with the danger symbol "", users must follow instructions to

operate safely.

- ◆ The manual mark with the extremely dangerous symbol "  ", users must strictly follow instructions to operate safely.

1. Introduction

This Mini Type Clamp Leakage Current Meter is specially designed and manufactured for measuring AC leakage current. The meter adopt with CT technology and digital integration technology, which has the characteristics of small size, high precision and complete functions. Widely used in electric power, communications, meteorology, railways, oil fields, construction, metrology, scientific research and teaching units, industrial and mining enterprises and other fields.

This Mini Type Clamp Leakage Current Meter sensing core is made of special alloy and adopt with magnetic shielding technology, which is almost unaffected by external magnetic field, ensuring high precision, high stability and high reliability of uninterrupted measurement for long time. The meter also has functions such as peak hold, data hold, and data storage. It is easy to use and is an essential tool for electric safety testing.

2. Electrical Symbol

	Extremely dangerous! The operator must strictly observe the safety regulations, otherwise there would be danger of electric shock, and causing personal injury or injury accident.
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	Dangerous! The operator must strictly observe the safety regulations, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Warning! Operators must strictly follow safety regulations, otherwise cause personal injury or damage device.
	Double insulation
	AC
	DC

3. Technical Specifications

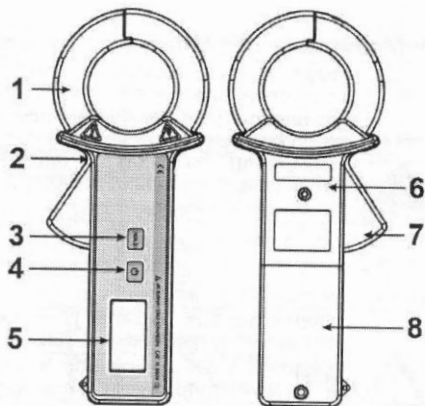
Function	Measurement of AC leakage current, AC current and on-line AC current.	
Power Supply	Alkaline dry battery LR03X2PCS	
Range	0.00mA~300.0A	
Measurement Accuracy	0.00mA~60A	$\pm 1.5\% \text{rdg} \pm 5 \text{dgt}$
	60A~300A	$\pm 2\% \text{rdg} \pm 5 \text{dgt}$
Resolution	10uA	
CT Size	Φ 40mm	

Meter Size	180mmX72mmX32mm
Weight	0.31kg(include accessories)
Test Mode	Clamp CT, integration method
Display Mode	4digits LCD display
LCD Dimension	35mmX21.5mm; display area: 32mmX15mm
Sampling Rate	about 2 times/s
Frequency	Automatic identification 50Hz/60Hz
Shift	Automatically
Line Voltage	Line measurement below AC600V
Data Storage	99units, flashing display "FULL" symbol indicate storage full
Peak Hold	Peak capture and hold function, long press HOLD key and not release can display peak value in measurement.
Data Hold	Data hold function: DH symbol display
Overflow display	Over range overflow function function: OL symbol display
Automatic Shutdown	5 Minutes after power on, the meter shuts down automatically without any operation to reduce battery consumption

Battery Voltage	While battery voltage drop to around 2.82V, will display low battery voltage symbol"  ", and remind to replace the battery
Working Current	5mA
Working Temperature	0°C~40°C,below 80%RH
Storage Temperature	-10°C~60°C,below 80%RH
Insulating Strength	AC2KV/rms (between the core and outside shell)
Suitable Safety Standard	IEC1010-1, IEC1010-2-032,Pollution 2,CAT III(600V)

4. Meter Structure

- 4.1. Clamp jaw
- 4.2. Meter front cover
- 4.3. **HOLD** Key
- 4.4. **POWER** key
- 4.5. LCD screen
- 4.6. Meter back cover
- 4.7. Trigger
- 4.8. Battery cover



5. Operate Method

5.1. Start-up & Shutdown

Press **POWER** key to start up, LCD display; Press the **POWER** key again to shutdown. The meter 5 minutes after starting up, LCD will flashes and indicate that will automatic shutdown, continue flashes 30s will shutdown formally to reduce battery consumption. In case press **POWER** key when LCD are flashing, the meter will continue to working 5 minutes. If LCD display is dark after start up, it may the battery voltage is low, please replace battery.

5.2. Measurement of Leakage Current, Current

	High voltage, extremely dangerous! Must be operated by trained and authorized personnel. The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Dangerous ! Cannot be used to measure current over the upper limit, otherwise there would be danger of electric shock, causing personal injury or injury accident

5.2.1. Start up the meter

5.2.2. Press down trigger to open jaw and clamp the measured wire conductors (note that the clamp jaw must be fully closed)

	Clamp the live and null lines together to measure the leakage current of the electrical equipment. (Clamp 2 lines)
	Clamp the grounding line to measure grounding line leakage current of electrical equipment. (Clamp single line)
	Clamp main line to measure Dtotal current of the main line. (Clamp single line)

When testing current, try to keep the tested wire at the center of the clamp jaw. If the tested wire deviates from the center of the clamp jaw, the error may increase by 1% ~ 4%.
Load current measurement only clamp single line, shown as figure 1:

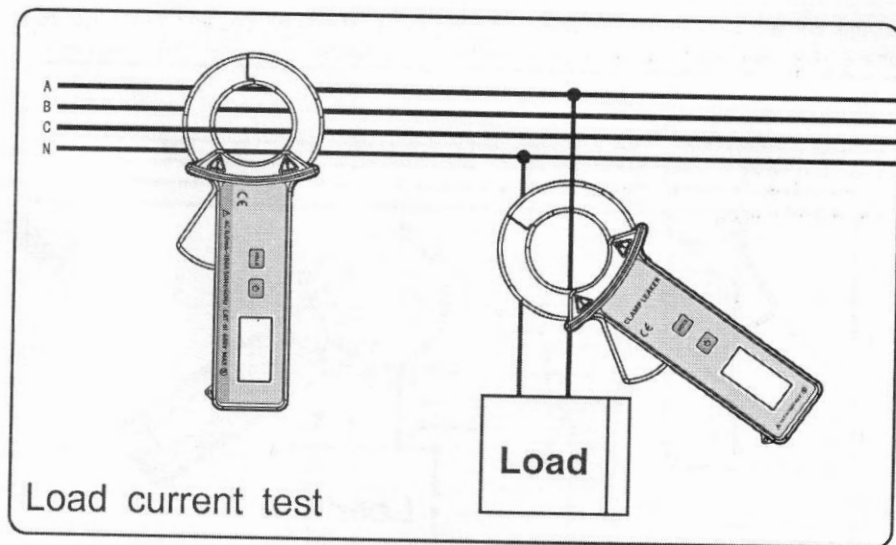


Figure1

Leakage current testing, simultaneous clamp(single phase 2-wire;single phase 3-wire; 3-phase 3-wire; 3-phase 4-wire) to measurement, shown as figure2:

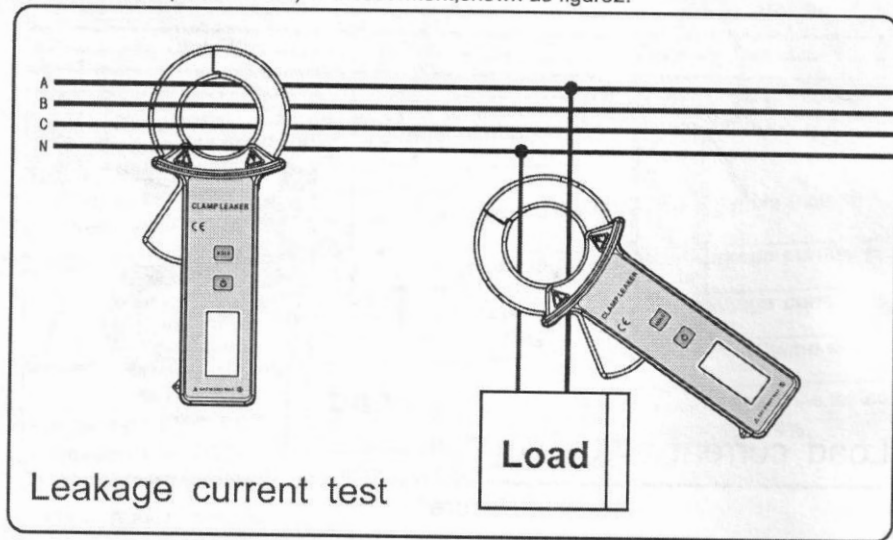


Figure2

Grounding leakage current measurement only clamp single grounding line, shown as figure3:

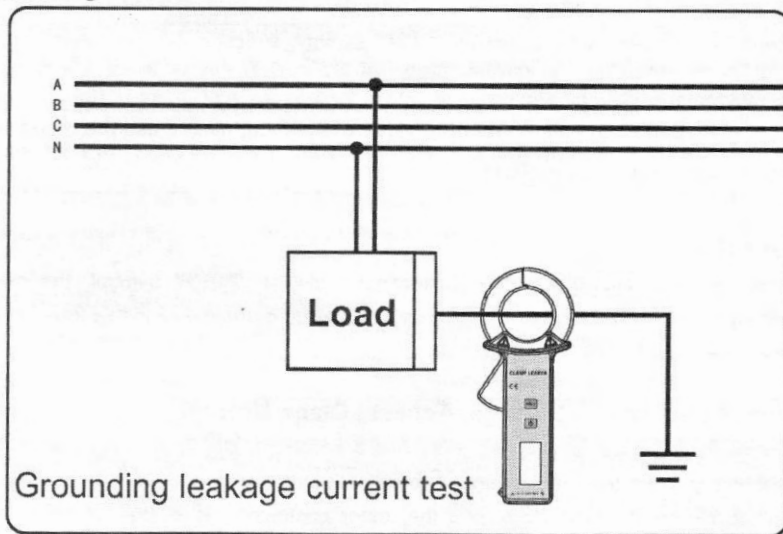


Figure3
10



Attention! For the safety, when measuring large current, please remove the meter from the tested wire after confirming that the test has been operated correctly.

5.2.3. Read LCD display data. If display "OL A" symbol, indicate that the current of the measured line is exceeding the maximum limit of this meter; Please use the meter has higher measurement range for testing.



Where it is not easy to reading value of the field, please use the data hold function. If display the [DH] symbol, it must cancel the data hold state first and then test again.

5.3. Peak Hold .

During testing press **HOLD** key(over 3 seconds), display "PEHd" symbol, the meter automatically captures and displays the current peak value of the circuit in this time period, and release the hand to return the test state.

5.4. Data Hold, Cancel, Storage, Access, Clear, Upload

5.4.1. During testing press **HOLD** key (less than 3 seconds), **DH** symbol will display, the meter will hold present testing data and automatically numbering and store; press **HOLD** key again to cancel the hold state, and the meter continues measuring; If stored data

reached 99groups, press **HOLD** key again, the "FULL" symbol will display, indicate storage data is full; press **HOLD** key to cancel "FULL" flashing and return to measuring mode.

5.4.2. Press **HOLD+POWER** keys enter into data access mode and display the 1st storage data automatically; and then press **HOLD** key again to turn the page and access stored data; If haven't storage data will display "null" symbol, press **POWER** key to exit data access mode.

5.4.3. After entering into data access mode, long press **HOLD** key (over 3 seconds) will clear all stored data; when the meter display "dEL" symbol, indicate that it has finished clear process, and then return to measuring state automatically.

6. Function Quick Checking

POWER key--short press	Start up/shut down/exit
HOLD key--short press	Data hold/relieve/store
HOLD key---long press exceed 3 seconds	Peak hold (in test mode)
HOLD key---long press exceed 3 seconds	Data delete (in data access mode)
HOLD key + POWER key	Data access/browse (HOLD key)

7. Display Sample

7.1.--- the tested leakage current is 0.25mA



7.2.--- low battery power, please replace the
Battery



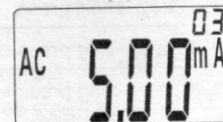
7.3.--- the tested leakage current is 5.00mA

--- hold testing data

--- automatic store with 03 group data



7.4.--- access the 03 group data of storage



8. Battery Replacement



Warning! The meter cannot test in case the battery cover is not covered properly, otherwise it is dangerous

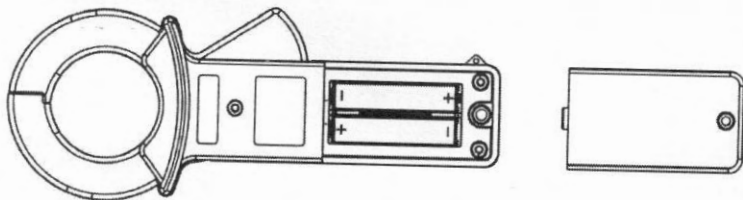
Please pay attention to the battery polarity, or will damage the meter.

Low battery, please replace the battery in time

If not use the meter for a long time, please take out batteries.

8.1. When the battery power is low, the meter display low battery voltage symbol, please replace the battery

8.2. Press **POWER** key to shut down the meter; and confirm the meter is in off state, and then open the battery cover, please attention batter model, and then replace with qualified new battery; cover battery cover plate.



9. Accessories

Meter	1 PCS
Package/Manual/Warranty card / Certification	1 SET