
SUPPER LARGE CALIBER LEAKAGE CLAMP METER



USER'S MANUAL

Precaution For Use

Thank you for purchasing our **7100 series Supper Large Caliber Leakage Current Clamp Meter**, In order to better for use of the product, please be certain:

-- **Read this user manual carefully.**

-- **Comply with the operating cautions in this manual.**

- ◆ Under any circumstance, shall pay special attention on safety in using this meter. Pay attention to the text labeled on the panel and backplane of the meter
- ◆ Keep the clamp clean and maintain regularly.
- ◆ Do not place and store the meter in high temperature and humidity or dewy places and under direct sunlight for a long time.
- ◆ Battery voltage is low, please replace the battery in time. Replace the battery, please pay attention to the battery polarity
- ◆ If you not use the meter for a long time, please take out batteries.
- ◆ Testing with this clamp meter, should try to keep the tested conductor in the center of the clamp.
- ◆ Use, disassembly and maintenance of this leakage current meter shall hand by authorized personnel.
- ◆ Due to the reason of this instrument, if it is dangerous to continue using, should stopped and sealed immediately ,and handled by an authorized institution.
- ◆ The meter manual with the danger mark "", users must follow instructions to operate safely
- ◆ The meter manual with the extremely dangerous mark "", users must in strict follow instructions to operate safely.

1. Introduction







7100 series Supper Large Caliber Leakage Current Clamp Meter is specially designed and manufactured for measuring AC leakage current and current, adopts CT technology and digital integration technology, large caliber (80mm×80mm: can clamp φ80mm cable, or 96mm×4mm grounding flat steel, especially suitable for cable leakage current and transformer grounding flat steel leakage current detection.) Automatic, can test one channel leakage current (current), convenient and fast. Widely used in electric power, communications, meteorology, railway, oil field, construction, measurement, scientific research and teaching units, industrial and mining enterprises and other fields.

7100 series Supper Large Caliber Leakage Current Clamp Meter iron core select and make with special alloy, adopts magnetic shielding technology, almost unaffected by the external magnetic field, ensures long time continuous measurement of strong anti-interference ability, ensure high accuracy, high stability and high reliability. The meter with the RS232interface, can storage data 99 groups, system software can upload storage data to computer, realize online real-time monitoring and historical query, dynamic display, with historical data reading, saving, printing and other functions. The instrument also has backlight function and data retention function, which is a necessary tool for electrical safety testing.

2. Model

Model	Range	Resolution	Storage Data	CT Size	Note
7100	AC 0.0mA-3200A	0.1mA	99 groups	108×148 mm	Measure leakage current
7100A	AC 0.0A-4000A	0.1A			Measure large current

3. Electrical Symbols

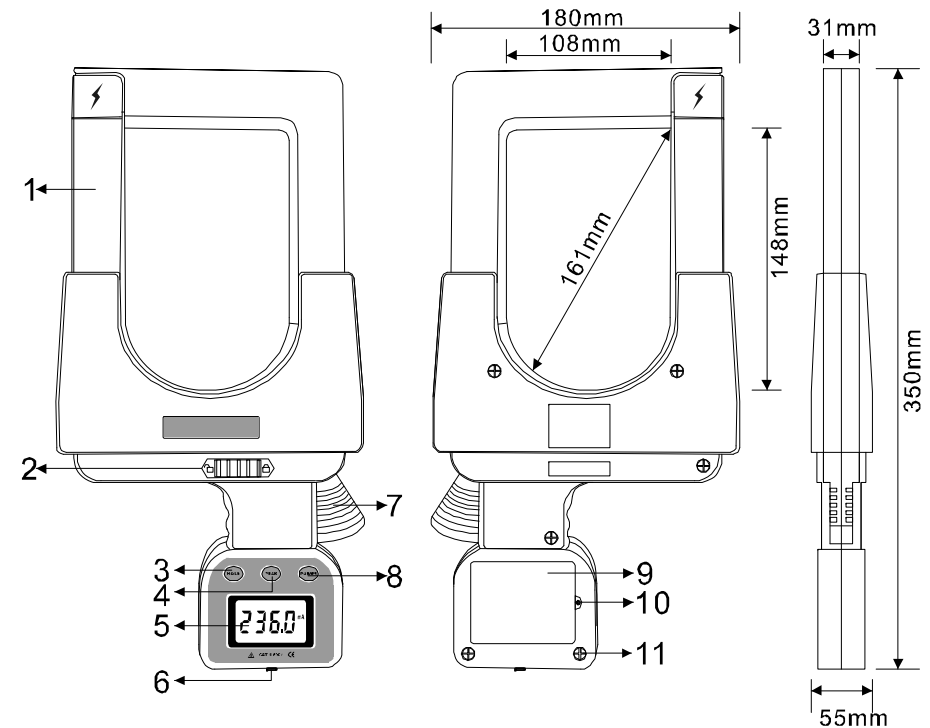
	Extremely dangerous! The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Dangerous! The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Warning! Operators must strictly follow safety rules, otherwise personal injury or equipment damage may occur
	Double insulation
	AC
	DC

4. Technical Specification

Function	Measurement of AC leakage current, large current (especially suitable for cable leakage and transformer grounding flat steel leakage detection)
Power Supply	6V DC(LR6X4PCS), continues working 12 hours
Test Method	Clamp CT, integration method
CT Size	108mm×148mm (can clamp φ 108mm cable, or 160mm×4mm grounding flat steel)
Range	7100: AC 0.0mA~3200A
	7100A: AC 0.A~4000A
Max Resolution	7100: AC 0.1mA
	7100A: AC 0.1A
Measure Accuracy (23°C±3°C, below 70%RH, measured wire at the center of the clamp)	AC 0.0mA~499A±2%rdg±5dgt
	AC 500A~999A±3%rdg±5dgt
	AC 1000A~2999A±4%rdg±5dgt
	AC 3000A~4000A±5%rdg±5dgt
Tested Conductor Position	The detected conductor is in the center position of the clamp
Data Storage	99 groups, flash display "FULL" symbol indicate storage full
USB Interface	With USB interface, storage data can be uploaded to computer,

	convenient to data analyze
Communication Cable	USB communication cable, length: 1.8M
Frequency	50Hz/60Hz(Automatic)
Shift	Automatically
Sampling Rate	2 times/second
Line Voltage	Below AC 600V circuit test
Display Mode	4 digital LCD display, 47mm×28.5mm
Meter Dimension	350mm(L)×180mm(W)×55mm(H)
Backlight	Yes, suitable for usage in dim place
Data Hold	Data hold function: "HOLD" symbol display
Overflow Display	Exceed measure range overflow function: "OL" symbol display
Peak Hold	Press PEAK key, start the peak hold function, press PEAK key again cancel this function
Automatic Shutdown	Start up for about 5 minutes without operation, the meter will shut down automatic to reduce battery consumption.
Battery Voltage	While battery voltage is lower than 5.2V. low battery voltage symbol display, remind to replace the battery
Weight	1.5Kg
Package Weight	3KG
Working Environment	-10℃~40℃; below 80%rh
Store Environment	-10℃~60℃; below 70%rh
Insulation Strength	AC3700V/rms(Between iron core and shell)
Suitable Safe Standard	IEC1010-1、IEC1010-2-032、Pollution2、CAT III(600V)

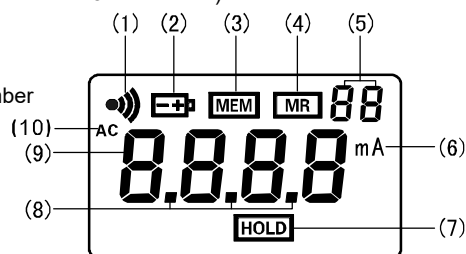
5. Instrument Structure



- 5.1. Clamp (108mm×148mm)
- 5.2. Lock plunger (locking the clamp cannot open)
- 5.3. HOLD key
- 5.4. PEAK key
- 5.5. LCD displayer
- 5.6. USB interface (data upload to computer)
- 5.7. Trigger (control clamp open and close)
- 5.8. POWER key
- 5.9. Battery cover
- 5.10. Fix screw of battery cover (1pcs)
- 5.11. Connection screw of front and back cover (6 piece)

6. LCD Display

- 6.1. PEAK test mode indication
- 6.2. Low battery voltage symbol (lower than 4.8V indication)
- 6.3. Data storage symbol
- 6.4. Data access symbol
- 6.5. 2 digital storage data group number
- 6.6. Current unit symbol (mA or A)
- 6.7. Data lock symbol
- 6.8. Decimal point
- 6.9. 4 Digital LCD display
- 6.10. AC symbol



7. Operation Method

7.1. Start Up & Shutdown

Press **POWER** key to start up, LCD display and enter into test mode; if the LCD display dark after start up, it may be the battery voltage low, please replace the battery. The meter start up after 5 minutes without any operation will automatic shutdown. In the data access mode, press Hold key first exit data access mode, return to normal test mode, press the POWER key to shut down.

7.2. Data Hold/Storage

In test mode, press **HOLD** key to hold displayed data, "**HOLD**" symbol display, press **Hold** key to relieve data lock state, return to test mode, "**HOLD**" symbol disappear. While press HOLD key to hold the data, the instrument will automatically number and store the present hold data. During the stored procedure "**MEM**" symbol flashes one time, the meter can store 99 groups of data. If the storage full, "**FULL**" symbol Continuous flashing and display, it must clear the memory and can storage again

7.3. Data Access, Exit

In test mode, press **PEAK** key + **POWER** key enter into data access mode, display "**MR**" symbol, at the same time display the stored data of group NO. 01, press **PEAK** key or **POWER** key scroll up or down to look up the data, When you browse to the last set of stored data, will returned to the first group data automatically.

Press **HOLD** key again exit data access mode, and turn back to test mode.

7.4. Data Upload

Connecting the meter and computer with USB communication cable. Start up the meter, run software, choose history access, then read, save, report, print history data, etc.

The more data storage, take the longer time to reading. Historical data can be saved in **Txt** text or **Excel** format.

7.5. Data Delete

In the data access mode, long press **PEAK** key + **POWER** key to delete all the stored data, and return to normal test mode. During data delete procedure display "**dEL**" symbol.

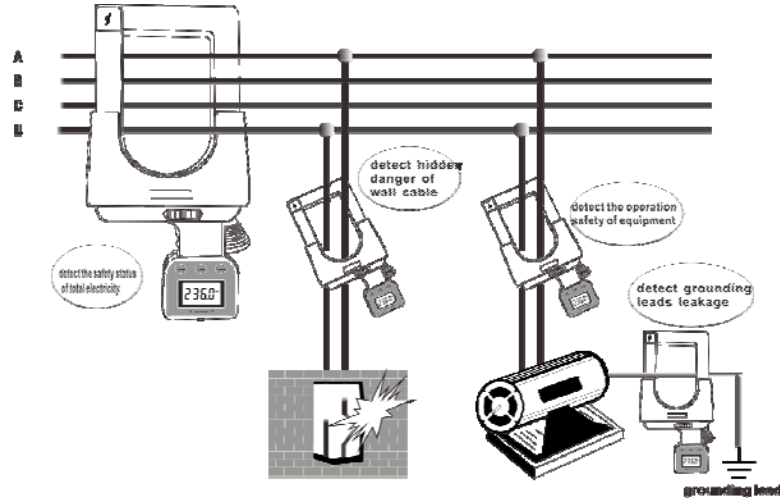
7.6. Normal Test

Normal test: the LCD display the measured current and leakage current in real time during the test. The LCD data changes with the current and leakage current magnitude. When the meter is withdrawn from the tested wire, the test result is not kept, and the LCD display returns to zero.

During the current testing, the wire should in the center of the clamp, if the tested wire is off-center position of the clamp jaw, the error may increase 1%~4%

	Electricity, 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 over 600V circuit, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Leakage current, current test must keep the clamp mouth fully closed.
	The conductor should be in the center of the clamp as far as possible
	Clean the clamp head and maintain the meter after the test
	Clamp live wire and null line together is to measure leakage current of electrical equipment. (Clamp 2 lines)
	Clamp earth wire is to measure grounding line leakage current of electrical equipment. (Clamp single line)
	Clamp 3 phase 4 lines together is measure the total leakage current (Clamp 4 line)
Clamp main line is to measure the current of the main line. (Clamp single line)	

Test reference illustrations:



In **HOLD** mode, press **HOLD** key to return to the normal test mode. In data access mode, press **HOLD** to exit the data access mode and return to the normal test mode. In **PEAK** test mode, press the **PEAK** key to exit **PEAK** test mode and return to normal test mode. Automatically returns to normal test mode after data is cleared.

7.7. PEAK Test

PEAK test: Max current test. During the test, the instrument will automatically compare the changes of the measured current and keep the maximum current value of the line in the present period. When the meter withdraws the measured lead, the test result will be kept, which is suitable for the line test that is not easy and direct to read the LCD data.

In normal test mode, press the **PEAK** key to enter or exit the **PEAK** test mode. Flashing symbols in **PEAK** test mode. In other modes, must return to the usual test mode first and then follow the above operate step for **PEAK** testing.

8. Battery Replacement

	Warning! The meter cannot test in the situation of the battery cover plate is not covered properly,, otherwise it is dangerous
	Please pay attention to the polarity of battery, or will damage the leaker.
	Low battery, please replace the battery in time
	If you not use the leaker for a long time, please take out batteries.

8.1. When the battery power is lower than 5.2V, 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.
- 8.3. Press **POWER** key to confirm the battery change if succeed or not, or return to operate the step 2.

9. Accessories

Meter	1 PCS
Meter Case	1 PCS
Data Upload Software(CD)	1 COPY
USB Communication Cable	1 PCS
User Manual	1 PCS
Guarantee Card	1 PCS
Certification	1 PCS

The company is not responsible for other losses caused by use.

The contents of this user manual cannot be used as a reason to use the product for special purposes.

The company reserves the right to modify the contents of the user manual. If there are any changes, no further notice will be given.