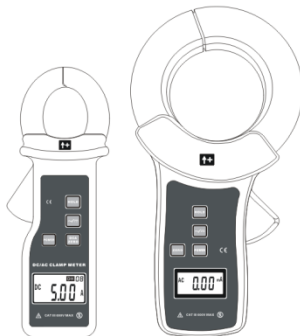


ETCR[®] DC/AC CLAMP METER

ETCR 6100
ETCR 6800D

www.etcrcr.cc



USER MANUAL

Guangzhou ETCR Electronic Technology Co., Ltd

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Warning

Thank you for purchasing our company's **ETCR6100/ETCR6800D AC/DC Clamp Leaker**, for better use of this product, please:

——**Read carefully the user's manual.**

——**Follow strictly safety rules and notes listed in this manual.**

- ◆ Under any circumstances, please pay special attention to your safety in the course of using this leaker.
- ◆ Give heed to label texts and symbols on panel and back plate of this leaker.
- ◆ Please be more careful if the line voltage is above 60VDC or 30VAC.
- ◆ Put the tested wire through the geometrical center of jaw when measuring AC current, error will increase if deviate the center.
- ◆ Please don't place and store this leaker in hot and humid condition, locations with moisture condensation and under direct sunlight for a long time.
- ◆ In case voltage of battery was low, please replace batteries.
- ◆ In case this leaker would not be used for a long time, please take out batteries.

- ◆ When changing batteries, please pay attention to polarity of battery.
- ◆ Use, disassembly and maintenance of this leaker shall be operated by authorized personnel.
- ◆ In case dangers would have with continues use of this leaker, please stop to use it and seal it for safekeeping immediately; and then, send it for disposal of authorized agency.
- ◆ Users shall carry out operation based on danger signs “  ” on leaker and manual.
- ◆ Users shall carry out safety operation based on instructions listed in this manual, e.g. “  ” and danger signs on this manual.
- ◆ Please use **am** to test leakage current (test by clamping grounding line, single-phase line together).




I Introduction




ETCR6100 /ETCR6800D AC/DC Clamp Leaker is specially designed for measurement of AC/DC current below 600V; by adopting up-to-date CT technology and digital integration technology. There is no exposed metal on clamp head, non-contact measurement, to ensure safe operation. It is a product with relatively small size, high accuracy and perfect function compared with similar leakers in the world. The leaker could be widely applied

in those fields as electricity, communications, meteorology, railroad, oilfield, construction, measurement, scientific & research teaching institutes, industrial and mining establishments. It is an essential tool for electrician safety testing

ETCR6100/ETCR6800D AC/DC Clamp Leaker has those functions as peaking holding, data holding and data storage. It obtains one RS232 or USB interface, communication cable and monitoring software, through which on-line monitoring, historical data inquiry is available. It also have functions such as active curve drawing, indication of max, min and average value, alarm setting and indication, saving to documents and printing when connected to PC.

II Electrical Signs


	Extremely dangerous! Operators shall strictly observe safety rules; otherwise there would be dangers of electric shock to cause personal injuries or casualties.
	Dangerous ! Operators shall strictly observe safety rules; otherwise there would be dangers of electric shock to cause personal injuries or casualties.
	Warning ! Operators shall strictly observe safety rules; otherwise personal injuries or equipment damages might be

	caused.
	Double insulation
	AC
	DC

III Technical Specifications

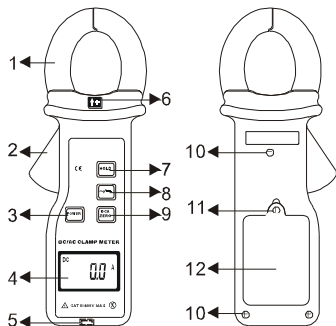
Model	ETCR6100	ETCR6800D
Size of clamp	30mm×35mm	Φ68mm
Range	0.0A~1000A DC/AC	DC:0.0A-2000A AC:0.0A-1500A
Accuracy	±2%rdg±3dgt	±2%rdg±3dgt
Resolution	0.1A	0.1A
Dimension	175mm×70mm×38mm	224mm×115mm×43mm
Data interface	RS232	USB
Weight	180g(with battery)	515g(with battery)
Function	Measurement of AC/DC current, Peak value hold, On-line monitoring	
Power Supply	Zn-Mn dry battery 6F22 9V, lasting for 100 hours	

Test Mode	Clip-on CT, integral mode
Display Mode	Four digits LCD display
LCD Dimension	35mm×21.5mm; display domain: 32mm×15mm
Frequency	AC 45Hz~400Hz
Sampling Rate	2 times/s
Polarity Indication	DC current auto identified and display“—”
Test Position	Tested wire in the jaw center; Error will increase to 1.5%rdg max if deviate the center
Range Shift	Automatically
Line Voltage	AC600V
Software	with the software the data can upload to computer
Data Memory	99units, FULL blinks when the memory is full
Peak Hold	Push HOLD without release, the meter will show the peak value during the pushing period
Reading Hold	DH indicating the reading is hold
Out of Range	OL indicating the current is out of range

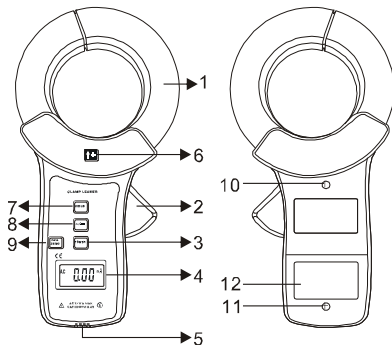
Auto Power-off	5 Minutes after power on, it will power off automatically to lower the power consumption
Battery Voltage	 Indicating the battery voltage is lower than 7.2V. Then the battery have to be changed
Consumption	10mW
Temperature and Humidity	-10°C~50°C; Below 80%rh
Max error refer to environment	-10°C~0°C, 40°C~50°C, Error will increase max to 1%rdg
Temperature and Humidity for storage	-10°C~60°C, below 70%rh
Insulating Strength	AC2kV/rms. (between the alloy of the clamp and the housing)
Applicable safety rules	IEC1010-1, IEC1010-2-032, Pollution level 2, CAT III (600V)

(Condition: 23°C±5°C, below 75%rh, wire in the center of jaw)

IV Structure




ETCR6100



ETCR6800D

1. Double input toroid
3. **POWER** key
5. RS232 interface
7. **HOLD** Key
9. **DCA ZERO** Adjust 0 key

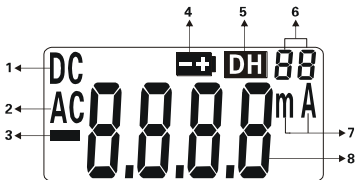
2. Toroid opening lever
4. LCD
6. Positive direction
8.  AC/DC switch key
10. Housing Screws (3 PCS)

11. Battery cover screw

12. Battery cover

V LCD Display

1. DC indication
- 2.AC indication
3. Negative polarity indication
4. Low battery symbol
5. Data hold indication
6. Stored data code
7. Unit of current indication
8. Value of current




VI Operating Method

1. Start-up, Shutdown

Press **POWER** key to start up, LCD will begin to display; Press the **POWER** key again, the leaker will shut down. After starting up for 5 minutes, LCD will flicker notes that the leaker will shut down automatically; after flickering for 30s, it will shut down formally to reduce battery consumption. In case you have pressed **POWER** key when LCD was flickering, the leaker will continue to work for 5 minutes. If LCD was very dark after starting up, it might be caused by low-voltage battery, in this

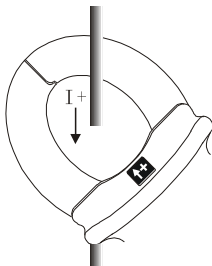
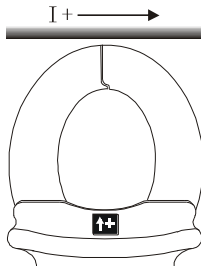
case, please change battery immediately.

2. AC/DC measurement switch



The tester default to DC measurement after boot up. Press  to switch the AC/DC function. LCD will display DC or AC to corresponding switch function.


3. DC Calibration

Before measuring DC current, press DCA ZERO key to reduce the residual magnetism to Zero, and then conduct measurement. Rational usage of this Adjust Zero function will make the results more accurate. For example, after boot, before measurement, we can take the jaw close to the DC current wire. LCD will show an inductive current. Press DCA ZERO to calibrate, which deduct the inductive value. Showing below:

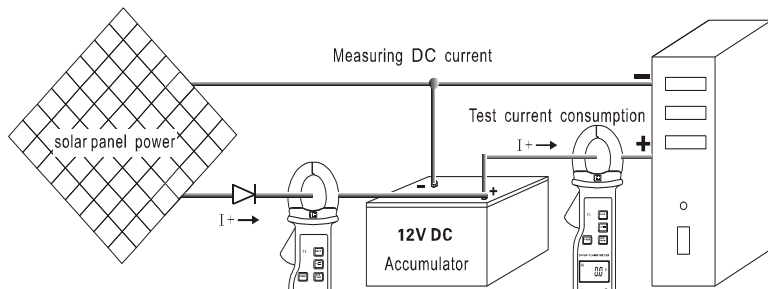
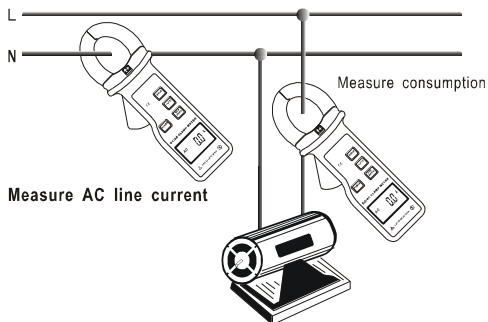
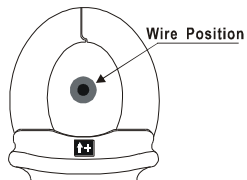



4. Current Measurement

	High voltage, extremely dangerous! Operators shall strictly observe safety rules; otherwise there would be risk of electric shock to cause personal injuries or casualties.
	Dangerous! Please don't use it to measure current higher than 300A; otherwise there would be risk of electric shock to cause personal injuries or equipment damages.

- 1) Power on
- 2) Press  to DC or AC measurement. Conduct Adjust Zero before measure DC current.
- 3) Release the toroid lever to open input toroid and clamp measured conductors. Be attention that the two input toroid must be totally closed and the measuring wire passing through the center of the jaw.
- 4) Read LCD display data. In case **OL am** symbol was displayed, it means that current of measured line is beyond the maximum limit of this leaker; with this case, please choose leaker with much higher range

limit.



	Attention! For your safety, when measuring heavy current, after confirmed the completion of correct operating test, please move the leaker away from measured conductor.
	In locations with difficulty to read out data, please use the data holding function. If [DH] symbol displayed, please discharge data holding state first, and then do the test.

5. Peak Holding

Pressing **HOLD** key continually in the course of measurement (More than 3 seconds), the leaker will display **PEHd** and capture current peak values of lines in this period of time; release the key, it then will return to measuring state.

6. Hold, Storage and Access Reading

1) Pressing **HOLD** key for a short time in the course of measurement (less than 3 seconds), **DH** symbol will display, the leaker will hold current

measuring data and automatically stored in the memory with a code; press **HOLD** key again to release the hold state, and the leaker continues its measuring; in case stored data reached to 60 groups, press **HOLD** key again, the "**FULL**" symbol will display, which means storage memory is full; press **HOLD** key to cancel "**FULL**" flickering and return to measuring mode.

2) Press **HOLD**+**POWER** keys to enter into data access mode and display Unit 1 storage data automatically; and then press **HOLD** key again to turn the page of stored data; **NULL** will display when there is no data in stored in the memory, press **POWER** key to exit data access mode.


3) After entering into data access mode, press **HOLD** key for more than 3 seconds will clean up all stored data; When the leaker displaying "**dEL**" symbol, it means that it has finished cleanup process, and then return to measuring state automatically.


7. Data Upload

Make good connection of company with RS232 or USB communication wire of the Tester, switch on the Tester and run monitoring software, and if the software displays that interface is open and the connection is successful, then it can read the stored historical data, upload to company and preserve. Monitoring software has the function of online real-time monitoring and historical inquiry, dynamic display, with the maximum, minimum, and

average value indication, with alarm value settings and alarm indicator, and the function of historical data access, reading, preserve, print and other functions.

VII How to Change Battery

	Warning! It is dangerous to carry out test when the battery cover plate was not on its position.
	Please pay attention to polarity of battery to avoid damaging the leaker.
	Chang the low battery in time
	If not use the meter for a long time, please get off the battery to storage.

- 1) “” symbol means the battery is undercharge and need to be replaced.
- 2) Press **POWER** key to shut down the leaker; before opening the battery cover, please confirm the leaker is in off position, and then replace with qualified new battery; special attention shall be paid to polarity of battery; at last, cover battery cover plate.

VIII Accessories

Clamp tester	1 pc
USB Com cable	1 pc

Software	1 disk
Battery (6F22 9V)	1 pc
User Manual	1 copy
Warranty card / Certification	1 copy

 *Manufactured by*

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