


ETCR008 Sharp-nose Pliers Current Sensor

User Manual



Thanks for your purchase of ETCR008 Sharp-nose Pliers Current Sensor of our company. For better use of the product, please make sure:

- to read this user manual in details.
- to abide by the safety regulations and precautions strictly.

- Under any circumstance, it shall pay special attention on safety in use of this sensor.
- Pay attention to words and symbols stick on the panel.
- Keep the pliers clean, maintenance regularly.
- Stop using the sensor when there is a rupture or break.
- Please don't keep or store the sensor in the spot with high-temperature and moisture, or condensation, and under direct daylight radiation for a long time.
- This sensor is only to be used, disassembled, and repaired by qualified personnel with authorization.
- When it may cause hazard by continuous use for the reason of the sensor itself, it shall immediately stop using it and deposit it at once, leaving it for disposal by authorized agency.
- For risk of danger icon in manual , users must perform safety operations strictly in compliance with the manual content.

I . Introduction

ETCR008 Sharp-nose Pliers Current Sensor is used for measurement of AC current, leakage current, high order harmonic current, phase, power energy, power, power factor. It is portable, sharp-nose, no need to disconnect the measured circuits, non-contact, safe and fast. Suitable for narrow and line densely places, can be connected with phase detection analyzer, industrial control equipment, data recorder, oscilloscope, harmonic analyzer, electric power quality analyzer, high precision digital multi-meter, etc.

ETCR008 Sharp-nose Pliers Current Sensor is widely applied in electricity, communication, meteorology, railway, oilfield, construction, measurement, scientific and research teaching unit, industrial and mining enterprises.

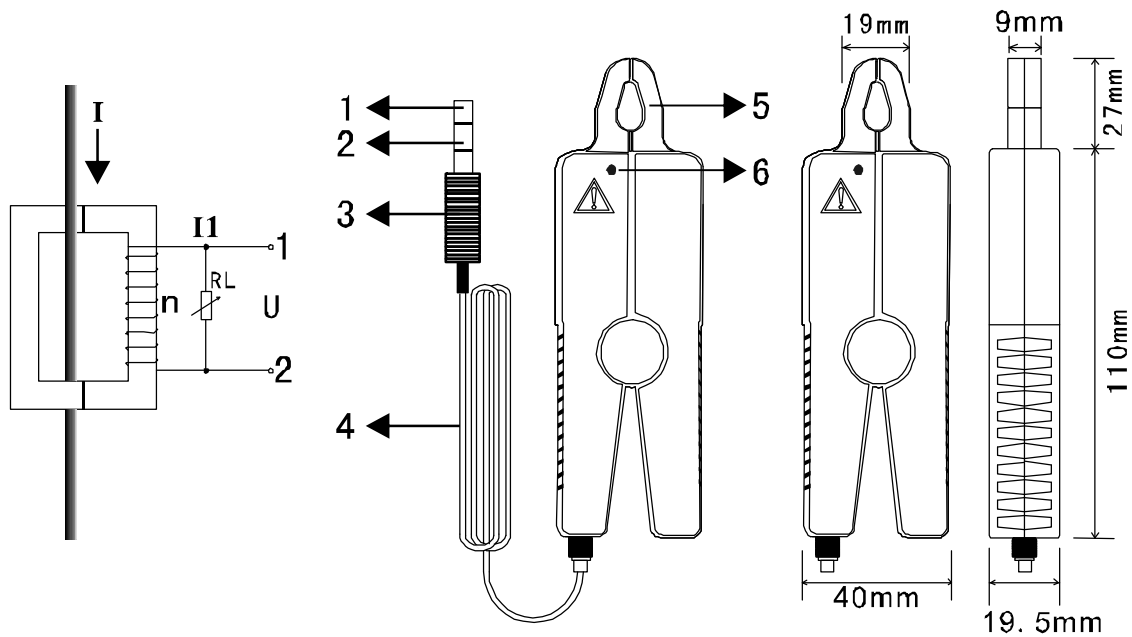
II . Technical Specifications

Function	Measurement of AC current, leakage current, high order harmonic current, phase, power energy, power, power factor
Test mode	Clamp CT
Clamp Size	Diameter 8mm
Range	0-30A
Resolution	0.1mA
Accuracy	0.5%FS(50Hz/60Hz; 23°C±2°C)
Coils Turn	2500:1(2000:1; 1000:1 is optional)
Phase Error	≤2°(50Hz/60Hz; 23°C±2°C)

Reference Load	RL: 0-300mA≤500ohm; 0-3A≤50ohm; 0-30A≤5ohm
Output Mode	Current induction output
Dimension	137mm×40mm×19.5mm
Output Interface	3.5mm audio plug
Output Wire Length	2m
Measured Wire Position	Approximately in the geometric center of the clamp
Circuit Voltage	Lower than 600VAC
Current Frequency	45H-60Hz(measured current frequency)
Frequency Characteristics	10H-100kHz
Weight	175g
Working Environment	-20℃-50℃; below 80%rh
Storage Environment	-10℃-60℃; below 70%rh
Insulation Strength	AC3700V/rms (between core and shell)
Safety Rules	IEC1010-1, IEC1010-2-032, Pollution degree 2, CAT III(600V)

III. Principle and Structure

The sensor induced output a current I_1 , the current I_1 generate voltage U on the external sampling load resistance RL , so the measured current I can be calculated by measuring I_1 or U . Among them, $I=n \times I_1$; $U=I_1 \times RL$. n is the coils turn (current ratio).



1. Coil tap 2. Coil tap 3. Sensor output plug (3.5mm audio plug) 4. Output lead wire
5. Pliers 6. Direction symbol (indicate the same polarity when measuring phase)

 **Manufactured by**

ETCR Electronic Technology Company

Address: F-3F, No.4 Pengshang Zhifu Road, Jiahe, Baiyun District, Guangzhou, Guangdong, China

Post Code: 510440

Tel: (86-20)62199556 62199553

Fax: (86-20)62199550

E-mail: info@etcr.cc

Website: www.etcr.cc