ETCR068AD Clamp AC/DC current sensor

User Manual

Thanks for your purchase of ETCR068AD Clamp AC/DC 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.

Note:

- 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

ETCR068AD Clamp AC/DC current Sensor is used for measurement of AC/DC current, phase, power energy, power, power factor. Adopt the latest CT technology. It is portable, large clamp design, no need to disconnect the measured circuits, non-contact, safe and fast. It 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. Widely applied in electricity, communication, meteorology, railway, oilfield, construction, measurement, scientific and research teaching unit, industrial and mining enterprises.

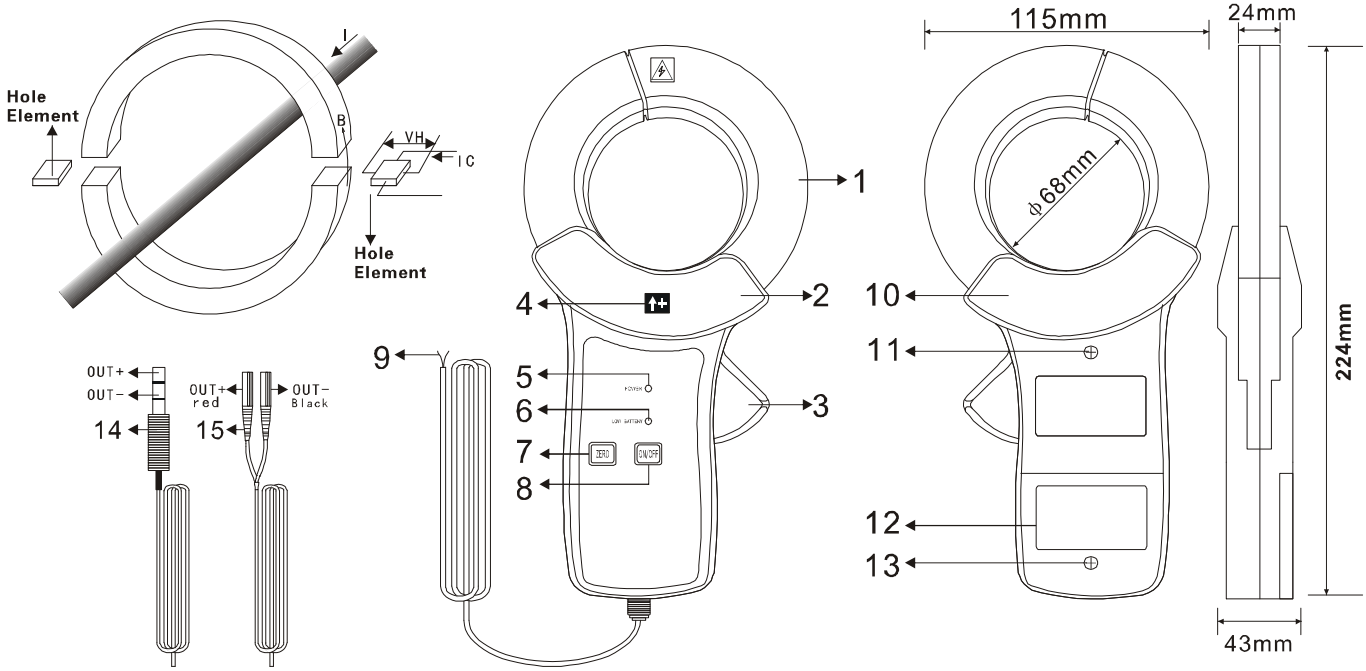
Ⅱ. Technical Specifications

Function	Measurement of AC/DC current, phase, power energy, power, power factor
Power supply	Zn-Mn dry cell 6F22 9VDC(external power source is allowed)
Rated current	15mA
Test mode	Clamp CT
Clamp Size	Φ68mm
Range	DC 0.00mA~2000A; AC 0~1000A
Resolution	0.1A AC/DC
Signal output	0.1mV/1A
Accuracy	±2.0%FS(50Hz/60Hz; 23℃±2℃, below 70%RH, keep the wire be in the center of clamp)
Phase Error	≤3°(AC50Hz/60Hz; 23℃±2℃)
Zero clearing	Press zero key is to clear the data, eliminate the effect of geomagnetic field to the measurement of AC current
Output connection	Standard connection: Red wire-positive output; Yellow

	wire-negative output.
Output Wire Length	2m
Measured Wire Position	Approximately in the geometric center of the clamp, the errors for deviating the center of the clamp increase 1.5%rdg.
Current Frequency	AC:45Hz-400Hz
Voltage of circuit	Below AC 600V
Voltage of battery	When the voltage of battery decline to 7.2V, and the LED light will be on to indicate replace the battery.
Dimension	224mmx115mmx43mm
Weight	515g
Working Environment	-10℃~45℃below 80%rh
Storage Environment	-10℃~60℃;below 70%rh
Insulation Strength	AC 3700V/rms.(between coil and shell)
Safety Rules	IEC1010-1,IEC1010-2-032,Pollution degree:2 CAT Ⅲ(600V)

Ⅲ. Principle and Structure

Adopt the combination of split coil and hall element, can use to measure AC current and DC current, when current Ⅰ go through the sensor, hall element will output a hall voltage V_H, measure the hall voltage V_H and calculate the current Ⅰ. Hall voltage V_H is in proportion to current Ⅰ, and the output of sensor is: 1mV/1A, it means that when the input current is 1A, the ratio-metric voltage is1mV.



1. Clamp 2. Up cover 3. Trigger. (Open and close the clamp).
4.Indicate of positive input AC current 5.Power-on indication 6.Low voltage indication 7.ZERO clearing key 8.ON/OFF key, the switch of the power 9.Output wire(Red wire-positive signal output; Yellow-negative signal output) 10.Down cover. 11. Screws of up/down cover (3 screw, two of them are inside the cover) 12.Cover of battery 13.Screws of battery cover. 14.Output lead(Φ3.5 audio plug, match) 15.Output lead (probe of multi-meter, match)

⚠ ***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