



HTQA-C Transformer Calibrator



Product Introduction

Current Transformer (CT for short thereafter) is very similar to general transformers. General transformers are used in the circuit to alter voltage, while CTs are used to alter current. And that's why CT was called converter. Now, devices that transform direct current (DC for short thereafter) into alternating current (AC for short thereafter) are named converters. And devices that are used to alter the magnitude of the current are named CT.

So why must we alter the current? That's because the needed current varies dramatically from a couple of Amperes (A for short thereafter) to thousands of A, according to the requirement. We would have to make a large number of ammeters and other electrical instruments if we want to measure the currents directly. This brings a lot difficulty to the manufacturing. It's also dangerous because some circuits or wires may be burdened with voltage up to 220kV. And it's not permitted to measure the current directly.

However, with CT, we are able to change the various currents to a small range that is both safe and measurable. We can measure currents of all scales with electrical instruments of only one current gauge, for example, with 5A universal current.

Besides that, the structure of CT and transformer is very much alike, both with a pair of windings, one called primary winding and the other secondary winding. And both two windings are electrically insulated from each other. When the CT is working, the primary winding W is

connected to the circuit and the secondary winding W is connected to the electrical instrument. Therefore, when measuring under high voltages, though the primary voltage is very high, the secondary voltage is pretty low. So the staff and the device are both safe.

Thus, besides its convenience of changing the various currents to a small range, it also provides good insulation to ensure the safety of operators and instruments.

Product Parameters

Working Condition	5°C-40°C Relative humidity: <80%(25°C)
	Altitude: <2500m Power Frequency: 50Hz±0.5Hz
	Power Voltage: 220V±5V
Measuring Range	In-phase component(%): 0.0001~200.0 Resolution: 0.0001
	Orthogonal Component (min): 0.001~ 700.0 Resolution: 0.001
	Impedance(Ω): 0.0001~20.0 Resolution: 0.0001
	Admittance(ms): 0.0001~20.0 Resolution: 0.0001
Basic Error	In-phase Component: $\Delta X = \pm(X \times 2\% + Y \times 2\%) \pm D_x$ (with Class 1 to spare)
	Orthogonal Component(with Class 1 to spare)
	“X”, “Y”——Values Displayed
	“Dx, Dy”——Quantified Error Dx=2, Dy=5
	Percentage: Class 1.5 (with Class 1 to spare)
Working Range	(1) Current: (1%-149%)In (In =5A) (5%-149%)In (In =1A)
	(2) Voltage: (5%-149%)Un (Un =100V,150V,100V/√3) (5%-200%)Un (Un =100V/3)
Work Load	(1) Current: TO to TX<0.12Ω cosΦ=1.0
	(2) Voltage: a to x<0.25VA (100V)
Weight	5kg

Product features

- 1、 Application of 320×240 LCD, broad vision, long life self lighting, making it convenient to operate.
- 2、 All English interfaces, simple and nice.
- 3、 Extra—large display of percentage, ratio error and phase error, easy to observe.
- 4、 Automatic sampling, rightly meet the need of JJG314—1993 and JJG314—1994.
- 5、 Automatic identification of polarity fault and ratio error mistake.
- 6、 Software can be upgraded with time.
- 7、 Completely solve the testing problems that Class S encounters.
- 8、 Automatic switch of measuring range.
- 9、 Perfect combination of advanced circuit technique and DSP; ultimately avoid the instability of the impedance phase differential circuit.
- 10、 Power consumption: <15VA (with micro-printer) 、 <25VA (without micro-printer).
- 11、 Harmonic Suppression Ratio: >40db.