

**HZ5375**  
**5000A Primary Current Injection**  
**Tester**

**USER MANUAL**

Dear user:

Thank you for choosing HZ5375 5000A Primary Current Injection Tester.

We hope that this instrument can make your work easier and more enjoyable, so that you can get the feeling of office automation in the test and analysis work.

Before using the instrument, please read this manual, and operate and maintain the instrument according to the manual to prolong its service life. "Just a light press, the test will be completed automatically" is the operating characteristics of this instrument.

If you are satisfied with this instrument, please tell your colleagues; if you are not satisfied with this instrument, please call (0312) 6775511 to tell you to serve you at all times- Huazheng Electric Manufacturing Baoding Co., Ltd., our company will definitely make you satisfied !

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## I.Overview

### 1.purpose

HZ5375 5000A Primary Current Injection Tester (referred to as upconverter), our own self-developed test equipment, it combines the advantages of similar products at home and abroad, using CNC technology, strong anti-interference ability, compared with the previous generation upconverter Because of the use of low-power, large-capacity self-coupling voltage regulator and high permeability iron core converter, it has the advantages of large output power, small size and light weight. Mainly used in primary bus protection and various current transformer transformation ratio test projects, it is widely used in electric power, railway, petrochemical, metallurgy and mining companies such as scientific research, production and electrical test site.

### 2.Performance characteristics

- (1)Aesthetic and elegant PVC panel
- (2) Directly display the test values of primary current and secondary current, which is convenient for experimental observation and recording.
- (3) Secondary measurement, turn ratio and polarity display of CT PT
- (3)High measurement accuracy:0.5 level
- (4)High power, small size, strong load capacity
- (5) Small size and light weight, the volume is only 30% to 70% of similar products, so it is very convenient to carry.

## II.Technical Characteristic

### 1.Name and Classification

- (1) Name: HZ5375 5000A Primary Current Injection Tester.
- (2) Environmental group: It belongs to the group III instrument in GB6587.1-86 "General Survey of Environmental Measurement of Electronic Measuring Instruments" (that is, it can be used in outdoor environments).
- (3)Input voltage: AC380V  $\pm 10\%$
- (4)Power : 36KVA
- (5)Output current: AC0~5000A stepless adjustable, panel with digital display ammeter
- (6)Output voltage: 6V

- (7) Output waveform: The output current is a standard sine wave with small glitches, which is better than the power system requirements index standard, and the ripple coefficient is less than 0.3%. Standard sine wave
- (8) Measurement accuracy: (Using 0.2S grade material) The actual is about 0.3; each current can be smoothly and continuously adjusted, the accuracy is higher than 0.5. The current and voltage meter shows true and effective value, high accuracy and high stability.
- (9) Output current mode: true effective value is continuously adjustable;
- (10) Current stability: 0.2%
- (11) Structural form: Fission
- (12) Wiring method: according to requirements
- (13) Protection settings: overcurrent and overvoltage;

## **2.Operating**

- (1) After the wiring is completed, you should check it again to see if there is a wiring error and whether the connector is in good contact.
- (2) During the test, if there is a fire, and there is no abnormality such as no display when starting up, immediately turn off the power and recheck the wiring.
- (3) During actual wiring, the current output terminal should form a loop, otherwise the instrument will not output current.
- (4) The current riser is provided with a random output wire; the output external copper wire is selected according to 10A/mm<sup>2</sup>. (Standard configuration is two 3-meter test lines)
- (5) The capacity of the equipment is designed for one hour operation.

## **III.Working Principle**

### **Working principle**

- (1). The measuring circuit of the instrument includes a current measuring circuit and a current measuring circuit. (Voltage test can be added as required) The volt ampere characteristic function can be expanded.
- (2). The current measuring circuit includes micro current zero impedance CT, programmable amplifier circuit and sampling circuit.
- (3). The voltage measurement circuit includes PT isolated signal acquisition circuit, programmable

amplifier circuit and sampling circuit.

(4). The 16 bit single-chip microcomputer uses the computer digital real-time acquisition method to calculate the high-voltage voltage measurement value by measuring the amplitude of the voltage signal according to the voltage proportional relationship. The automatic timing function is realized by comparing the measured voltage signal amplitude with the set voltage value. The current output of the device can be calculated according to the current proportional relationship, The over-current protection function is realized by measuring the amplitude of current/voltage signal and comparing it with the set value.

## IV.Panel Description





## V. Operating Instructions

1. Connect the instrument host according to the diagram. (Figure 1)
2. Before the power line is connected, first turn the "current regulation" handle counterclockwise to the zero position. The current output terminals "L1, L2" are connected to the primary side of the measured current transformer, and the secondary side of the measured current transformer is connected to "K1, K2".(Figure 3)
3. Make sure the instrument and test object are connected to ground.
4. Connect the power supply, **2-phase 380V+neutral wire (N)**. The "Power Indication" lights up and the device is powered on.(Figure 2)

**Note:**You can not to connect three-phase 380V, which will damage the equipment! ! !

5. After the power is turned on, open the "power switch", press the "start" button, and turn the "current regulation" handle to adjust the output current , The characteristic test can be carried out on the tested equipment ("primary current" displays the current value input to the primary side of the transformer at this time, "secondary current" displays the current value of the secondary output

of the transformer at this time, and the transformation ratio of the tested transformer can be calculated according to the primary and secondary current values).

6.The impulse test can be conducted on the tested equipment.During the impulse test, it is necessary to adjust the required current, press the "Stop" button to power off the equipment, and then remove your hand to connect the power supply.

7. After the test, press the "Stop" button, turn the "Current Regulation" counterclockwise to "0". Then close the "Power Switch".

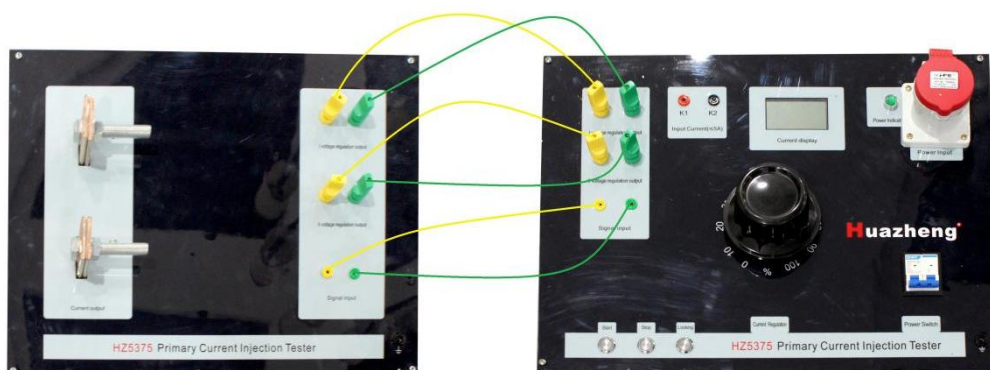


Figure 1. System wiring

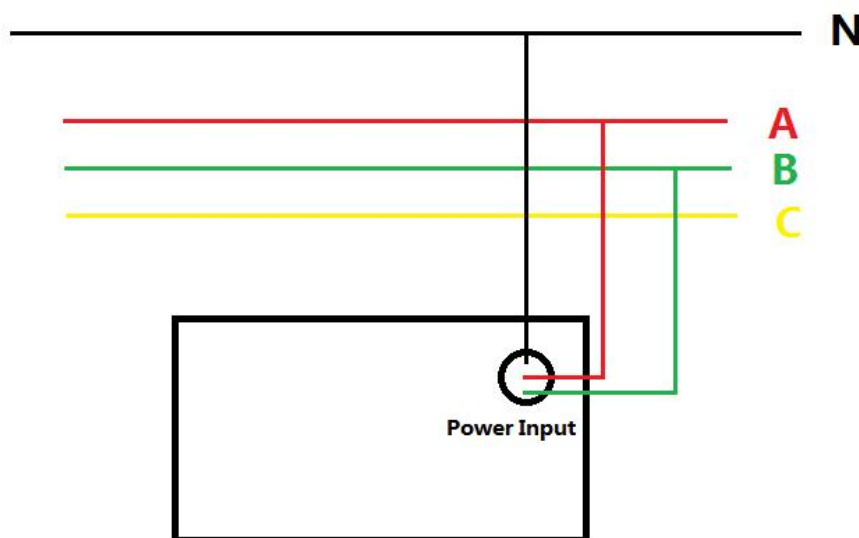


Figure 2. Power Connection

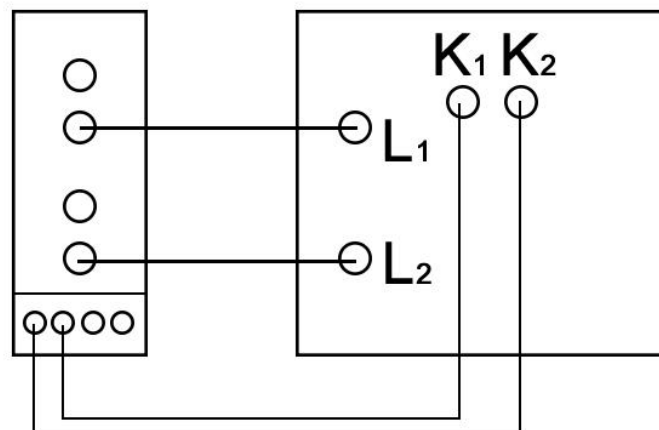


Figure 3. CT test wire

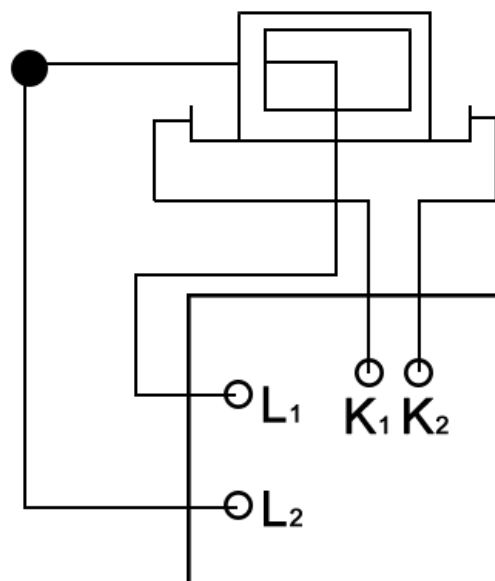


Figure 4. CT test

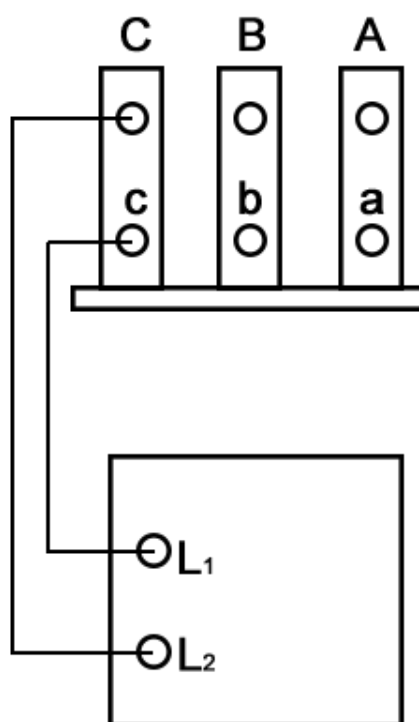


Figure 5. Circuit Breaker Test

## VI.Safety Precautions

- (1) For the safety of operators and instruments, ensure that the instruments are well grounded.
- (2) The ground wire shall be connected first when preparing for the test, and the ground wire shall be removed finally when the work is completed.
- (3) The power supply connected to the instrument shall be able to withstand 30A current impact.
- (4) When connecting the instrument and the test object, pay attention to check whether each wiring is wrong to avoid damage to the equipment due to wiring errors.
- (5) The maximum current value set for overcurrent protection shall not exceed the rated output current value of the instrument.
- (6) Do not plug or unplug any wires when the power is on.

## VII.Transportation And Maintenance

### 1.Transportation

This product must be packed during transportation. The packing box shall be wooden and shall be

padded with foam and other anti vibration layers. The packaged products shall be able to be transported by road, railway and air. During transportation, it shall not be placed in the open trunk, and the warehouse shall be protected against rain, dust and mechanical damage.

## **2.Storage**

The instrument shall be stored in a ventilated room with an ambient temperature of - 40 °C~60 °C, a relative humidity of no more than 82%, and no corrosive gas. It shall not be placed close to the ground and wall.

## **3.moisture-proof**

In humid areas or humid seasons, if the instrument is not used for a long time, it is required to turn on the power once a month (about two hours), so as to distribute moisture and protect electronic components.

## **4.Anti-Insolation**

When the instrument is used outdoors, avoid or reduce direct sunlight exposure to the display screen as much as possible, and do not put it in a particularly humid warehouse.

# **VIII. Quality Assurance And After-Sales Service**

1. The instrument is manufactured in strict accordance with national standards and enterprise standards, and the production process strictly complies with ISO9000 standards to ensure the quality of the instrument.
2. The instrument has a 1-year warranty period. During this period, if the quality is lower than the characteristic requirements due to manufacturing reasons, the company will repair it free of charge.
3. This instrument implements three guarantees.
4. Within the service life of the instrument, the company will provide long-term maintenance, training, accessories supply and other related services.
5. If problems are found in use, please contact our company in time. We will take different methods according to the situation: door-to-door maintenance guidance, or return to the factory for maintenance.